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ABSTRACT

This curriculum resource guide is intended to assist K-2 teachers in Georgia in using updated agriculture content for teaching basic information about the importance of agriculture. The materials included have been selected to reinforce the following points: that the agricultural system is historically significant, basic to human needs, interdependent with the environment, and interrelated with all other segments of society; that the system requires continual access to resources; and that agricultural production and distribution are globally interdependent. The materials are presented in an instructional unit format that includes instructional objectives, background information, appropriate resources, and primary as well as follow-up activities, and that makes lavish use of line drawings, map outlines, photographs, and other illustrative material. Gains in student knowledge may be measured by a pretest/posttest based on the factual information presented in the guide; a test for the K level and a test for grades 1-2 follow the lessons. A glossary and bibliography of materials for use with students in grades K-2 are also included. (MN)

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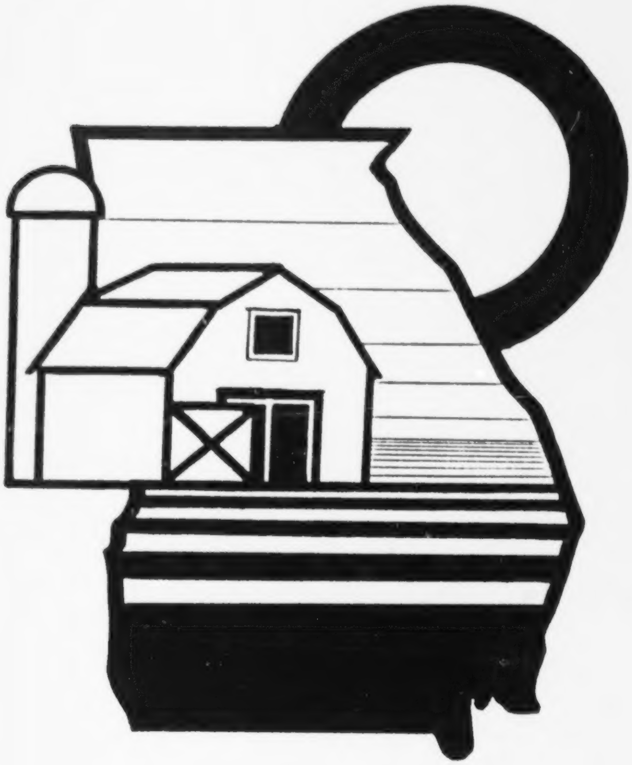
AGRICULTURE IN GEORGIA CLASSROOMS

KINDERGARTEN THROUGH SECOND GRADE

A RESOURCE GUIDE



GEORGIA DEPARTMENT OF EDUCATION
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19TH FLOOR, TWIN TOWERS, EAST
ATLANTA, GEORGIA 30334

1987

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AGRICULTURE IN GEORGIA CLASSROOMS

KINDERGARTEN THROUGH Second GRADE

A RESOURCE GUIDE

GEORGIA DEPARTMENT OF EDUCATION
DIVISION OF CURRICULUM SERVICES
13TH FLOOR, TWIN TOWERS, EAST
ATLANTA, GEORGIA 30334

1987

FOREWORD

As technology has advanced and modern man has moved further away from the farm, there is an increasing need to educate the young people of Georgia about agriculture and the role it plays in society. Agribusiness is a vital part of the economics of the state which includes both the direct and indirect activities associated with food and fiber production, processing, and marketing. As an integral segment of everyday life, farming concepts provide motivating content for teaching young children. Farming materials have an inherent appeal and generate a lot of curiosity from both rural and urban students. It is critical that students be informed about issues related to food sources, economics of agriculture, history of farming, and how farming affects their everyday lives.

This curriculum resource guide, *Agriculture in Georgia's Classroom*, was funded through a special grant from the Georgia General Assembly. It represents a cooperative effort between the education and agribusiness communities to promote agriculture concepts in kindergarten through fourth grade classrooms. We are confident the ideas and suggestions presented here will support local curriculum planning and staff development and they will help increase the overall knowledge of agriculture in elementary schools throughout the state.

Werner Rogers
State Superintendent of Schools

INTRODUCTION

Agriculture is Georgia's biggest business affecting all aspects of the state's economy. The immediate influence of farm production, processing, and marketing is apparent both in rural and urban settings. Many of Georgia's students have limited experiences and knowledge about the importance of agriculture. This curriculum resource guide is designed for K-2 teachers to utilize updated agriculture content in teaching basic concepts and skills within the existing curriculum framework.

The following major themes have been developed:

I. The Agricultural System Is Historically Significant
II. The Agricultural System Is Basic to Human Needs
III. The Agricultural System Is Interdependent with the Environment
IV. The Agricultural System Requires Continual Access to Resources
V. The Agricultural System Is Interdependent with All Other Segments of Society
VI. Agricultural Production and Distribution Are Globally Interdependent

These materials are presented in a practical unit format with instructional objectives, background information, appropriate resources, and primary as well as follow-up activities. The materials have been designed to increase the student's knowledge about agriculture. These gains are measured with a pretest and posttest based on the factual information presented in the guides.

Many statewide teachers have contributed to the development and implementation of these instructional resource materials. You are encouraged to use these materials as a means of teaching Georgia's young people about agriculture.

Lucille G. Jordan
Associate State Superintendent of Schools
Office of Instructional Services

Acknowledgements

The Office of Instructional Services is grateful for the time, effort, and expertise of the many people who assisted in developing this guide. These people represent all areas of the state and include classroom teachers, college professors, curriculum specialists, and administrators.

To these educators who were involved in this process, the Georgia Department of Education extends its appreciation:

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UNIT I: The Agricultural System Is Historically Significant.

GRADE LEVELS	PRINCIPLES	OBJECTIVES
K-2		The student will be able to
	1. Early settlers of our country used available resources for food, clothing, and shelter.	1.1 List food products found by the early settlers in the New World. 1.2 Describe materials used by early settlers to provide shelter. 1.3 Describe the products used by early settlers for clothing.
	2. Farm homes and family life have changed over time.	2.1 Compare farms of the past with those of today. 2.2 Describe the life of a farm family among the early settlers. 2.3 Discuss why fewer people live on farms today.
	3. Technology has changed production and distribution of agricultural products.	3.1 List the ways in which transportation is important to farmers. 3.2 Explain how transportation changes served agricultural needs previously. 3.3 Describe how communities and transportation centers developed together. 3.4 Describe the farm machines that replaced animals and people in farm production.

UNIT II: The Agricultural System Is Basic to Human Needs

GRADE LEVELS	PRINCIPLES	OBJECTIVES
K-2		The student will be able to
	1. Many of our basic human needs for food, clothing, and shelter are provided by the agricultural system.	1.1 Identify objects (or pictures) as representing food, clothing, or shelter.
		1.2 Identify objects (or pictures) as wants or needs related to food, clothing, or shelter.
		1.3 Locate on maps where in Georgia key agricultural products are grown.
	2. The American agricultural system allows a variety of choices in meeting basic needs.	2.1 List food crops grown in the United States.
		2.2 List products that are grown in the United States and are used to make clothing.
		2.3 List agricultural products used to provide shelter.
	3. Communities depend on the availability of agricultural products.	3.1 Name the locally grown agricultural products that affect the economy of the community.
		3.2 Identify persons in the local community who depend on agriculture for their livelihood.
		3.3 List the businesses in the local community directly related to agriculture.

NIT II: The Agricultural System Is Basic to Human Needs (continued)

GRADE LEVELS	PRINCIPLES	OBJECTIVES
-2	4. Foods from the basic food groups are essential to good health.	The student will be able to 4.1 Identify the basic food groups essential to good health. 4.2 Classify food products into the basic food groups. 4.3 Discuss the relationship of foods in the basic food groups to good health.

UNIT III: The Agricultural System Is Interdependent with the Environment

GRADE LEVELS	PRINCIPLES	OBJECTIVES
K-2		The student will be able to
	1. Farming is affected by the climate.	1.1 Describe how the agricultural products grown within an area are related.
		1.2 Describe the effects of weather on farming.
	2. The kinds of products farmers grow depend upon soil and water availability.	2.1 Explain how the agricultural products grown in various areas are related to available soil and water resources.
		2.2 Identify the types of soil found in the local area.
		2.3 Identify the major water resources available in the local area.
	3. Farmers must protect soil and water.	3.1 Explain how farmers can protect the water and soil resources.
		3.2 Explain why communities have rules governing soil and water resources.

UNIT IV: The Agricultural System Requires Continual Access to Natural Resources

GRADE LEVELS	PRINCIPLES	OBJECTIVES
K-2		The student will be able to
	1. Agricultural production is dependent on natural resources.	1.1 Define natural resources. 1.2 Identify the natural resources important to farmers. 1.3 Describe the resources available to farmers in the local area.
	2. Conservation is important to protect resources essential to agricultural production.	2.1 Identify natural resources that cannot be replaced. 2.2 Identify natural resources that can be recycled. 2.3 Describe how the farmer can protect the natural resources which are essential to farming.

UNIT V: The Agricultural System Is Interdependent with All Other Segments of Society

GRADE LEVELS	PRINCIPLES	OBJECTIVES
K-2		The student will be able to
	1. Farms and cities are interdependent.	1.1 Describe three city businesses which depend on farming for their success.
		1.2 Explain why farmers need the support of cities or of businesses and persons located in the city.
	2. Farm communities and the agricultural system are interdependent.	2.1 Discuss ways that the agricultural system helps a community.
		2.2 Describe community jobs that depend on the agricultural system.
		2.3 Discuss how the farmers in the local area depend on the community for support.
	3. Farm communities are dependent on transportation systems.	3.1 Identify the various methods of transportation.
		3.2 Identify the methods of transportation available to local farmers.
		3.3 Explain why transportation is very important to farmers.
	4. Farming is a career for many people.	4.1 Explain that farming is the way some families earn a living.
		4.2 Describe the skills and knowledge needed by a farmer to be successful.

UNIT VI: Agricultural Production and Distribution Are Globally Interdependent

GRADE LEVELS	PRINCIPLES	OBJECTIVES
K-2		The student will be able to
	1. Food and fiber are obtained through world trade.	1.1 Identify food products we use that are grown in other countries.
		1.2 Identify clothing fibers we use that are grown or produced in other countries.
	2. Food and fiber produced in the United States are sold to other countries.	2.1 List the food products that are produced in the United States and sold to other countries.
		2.2 Identify fibers or products made from fibers produced in the United States and sold to other countries.
		2.3 Identify Georgia food and fiber products which are sold to other countries.
		2.4 Identify food and fiber products grown in the local area and sold to other countries.

AGRICULTURE IN GEORGIA CLASSROOMS

Grades K-2

UNIT I: The Agricultural System Is Historically Significant

TIME: 2 to 3 Weeks (3 Lessons)

PURPOSE

The purpose of this unit is to help pupils gain an understanding of how our ancestors from the Old World had to use the available natural resources in the New World to provide food, clothing, and shelter. They will describe and compare farm homes and family life as they have changed throughout the history of America, and explain how technology has changed the production and distribution of agricultural products.

VOCABULARY

blacksmith
climate
colonists
consumption
corral
crops
distribution
drought
fiber
fruit
grains
immigrant
irrigate
livestock
marketing
pioneer
plantation
poultry
production
reproduction
resources
settler
soil
technology
terminal
trading post
transportation

EVALUATION

Evaluation for this unit should include the following:

- Pretest
- Teacher observation and evaluation of student's classroom participation
- Checking of worksheets and other assigned tasks, reviewing with students, and recording of grades
- Post test

UNIT I: The Agricultural System Is Historically Significant

LESSON 1: Early Settlers in the New World

PRINCIPLE: Early settlers of our country used available resources for food, clothing, and shelter.

OBJECTIVES

The student will be able to

- list food products found by the early settlers in the new world.
- describe materials used by early settlers to provide shelter.
- describe the products used by early settlers for clothing.

BACKGROUND NOTES

The early settlers in the New World were unable to bring with them from the Old World all of the materials they needed to grow food, make clothes, and build homes. It was necessary for them to use the materials and products they found in the New World. They found the coast of Georgia to be an excellent location to land after crossing the Atlantic Ocean.

In addition to the excellent location, the early settlers found an abundant supply of water without which no one can survive. The many springs in Georgia provided the water for the people to drink, and the many rivers provided them with water to grow crops. They found large areas of grassy lands which they needed for their animals. The soil and climate were also appropriate for growing a variety of crops.

Crops from the Old World which the settlers brought were peaches, oats, wheat, sorghum, sugarcane, beans, barley, and rye. Soybeans have a seed that can be used for food and that also provides a valuable oil. Barley is a grass which produces a grain that is useful feed for animals. Rye is a cereal grass used to make flour for humans and to feed livestock.

The Indians in the New World showed the settlers how to grow corn, peanuts, sweet potatoes, Irish potatoes, and field peas. They also introduced the settlers to growing and using tobacco and cotton. Cotton fibers were used to make material for clothing. There was an abundant supply of trees for use in building log houses needed for shelter.

BACKGROUND NOTES (continued)

Shelter was very important to James Edward Oglethorpe and his colonists when they landed on February 12, 1733, at Yamacraw Bluff and established Savannah, Georgia. The first few weeks in the new land they slept in tents, but they soon had plots assigned to them on which they chopped and sawed trees, plowed and planted gardens.

The early settlers did not know if the seeds and plants they brought from the Old World would grow in the New World. They did not know if the soil and climate would be suitable. Oglethorpe established the Trustees' Garden, a nursery, to determine which plants would grow best in Georgia, and to provide plants for the individual gardens established by the settlers.

MATERIALS AND AIDS

Worksheets 1-17
index cards
string
small incubator
clothes hangers
hole punchers
crayons
globe

ACTIVITIES

- Make two mobiles showing those products which the Indians contributed and those brought by the settlers to the New World. Use wire clothes hangers as a base, as pictured on Worksheets 1-1 and 1-2. Have the students cut out pictures of foods and paste on index cards. Have students identify those foods of Old World origin, and foods of Indian origin. Attach the foods of Indian origin to one mobile, and the foods of Old World origin to the second clothes hanger to make the other mobile. Hang mobiles in the classroom for the students to view.

Foods of Indian Origin

cotton
corn
peanuts
tobacco
sweet potato
Irish potato
field peas

Foods of Old World Origin

oats
wheat
sugarcane
barley
rye
peaches
sorghum
soybeans
velvet beans

Explain that the Old World is where the early settlers came from. Using a globe, show the students the Old World and how the immigrants crossed the ocean to come to the New World.

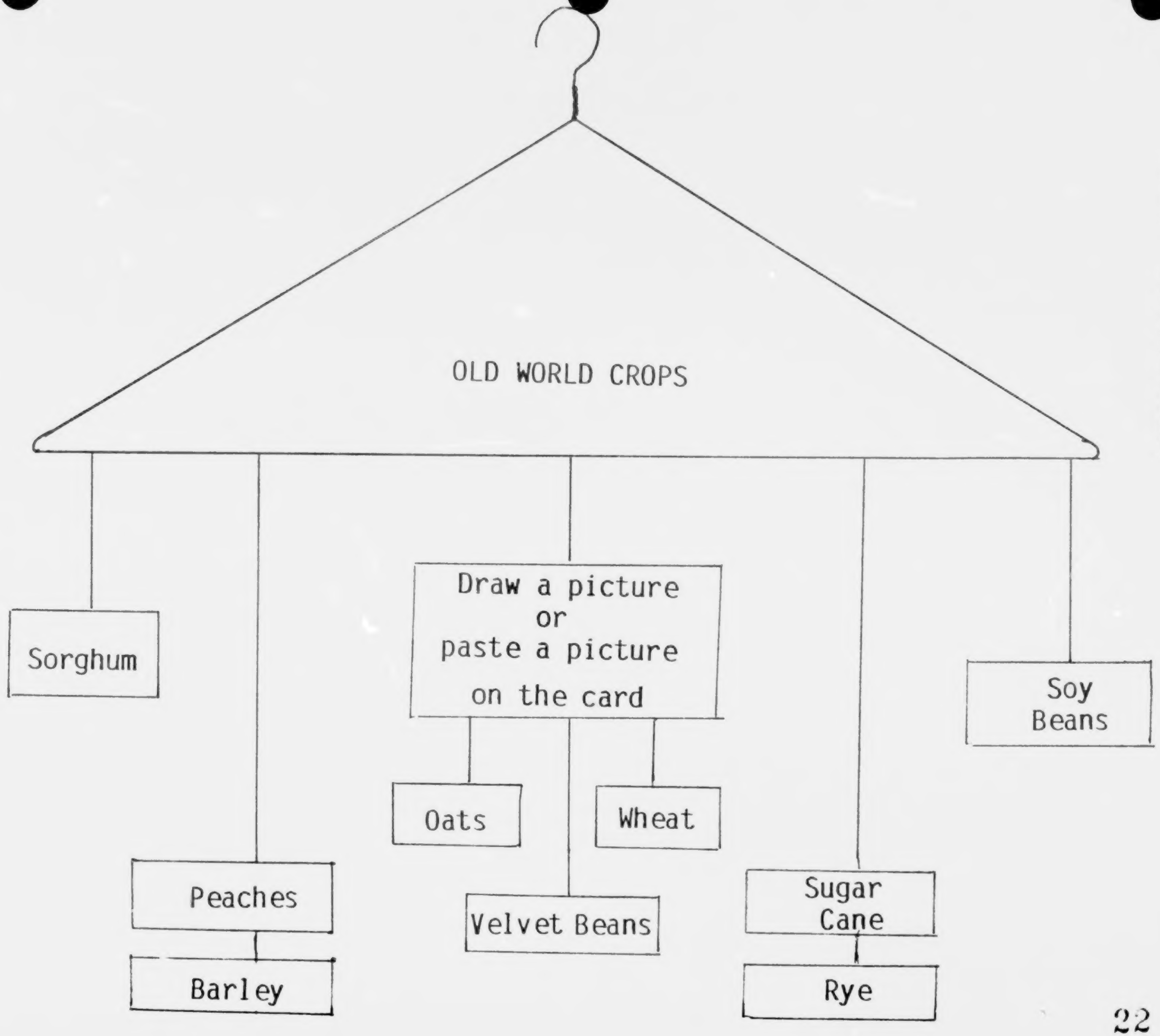
ACTIVITIES (continued)

- Use a United States map to show students the State of Georgia. Students will find and color their state on Worksheet 1-3.
- Use a Georgia map to show students the county in which they live. Students will find and color their county on Worksheet 1-4.
- Use Worksheets 1-5, 1-6, 1-7, 1-8, 1-9, 1-10, 1-11, 1-12, 1-13, 1-14, and 1-15 to read and show students foods and fibers grown in Georgia, and to lead into discussions about these and other crops.
- Use Worksheet 1-16. Ask students to look at the pictures and describe the buildings and clothes from the early days.
- Use Worksheet 1-17. Read and discuss pictures with pupils. Explain that the country store was the place where people from the farms bought their household supplies and food they didn't produce on their own farms, and visited to learn the news.

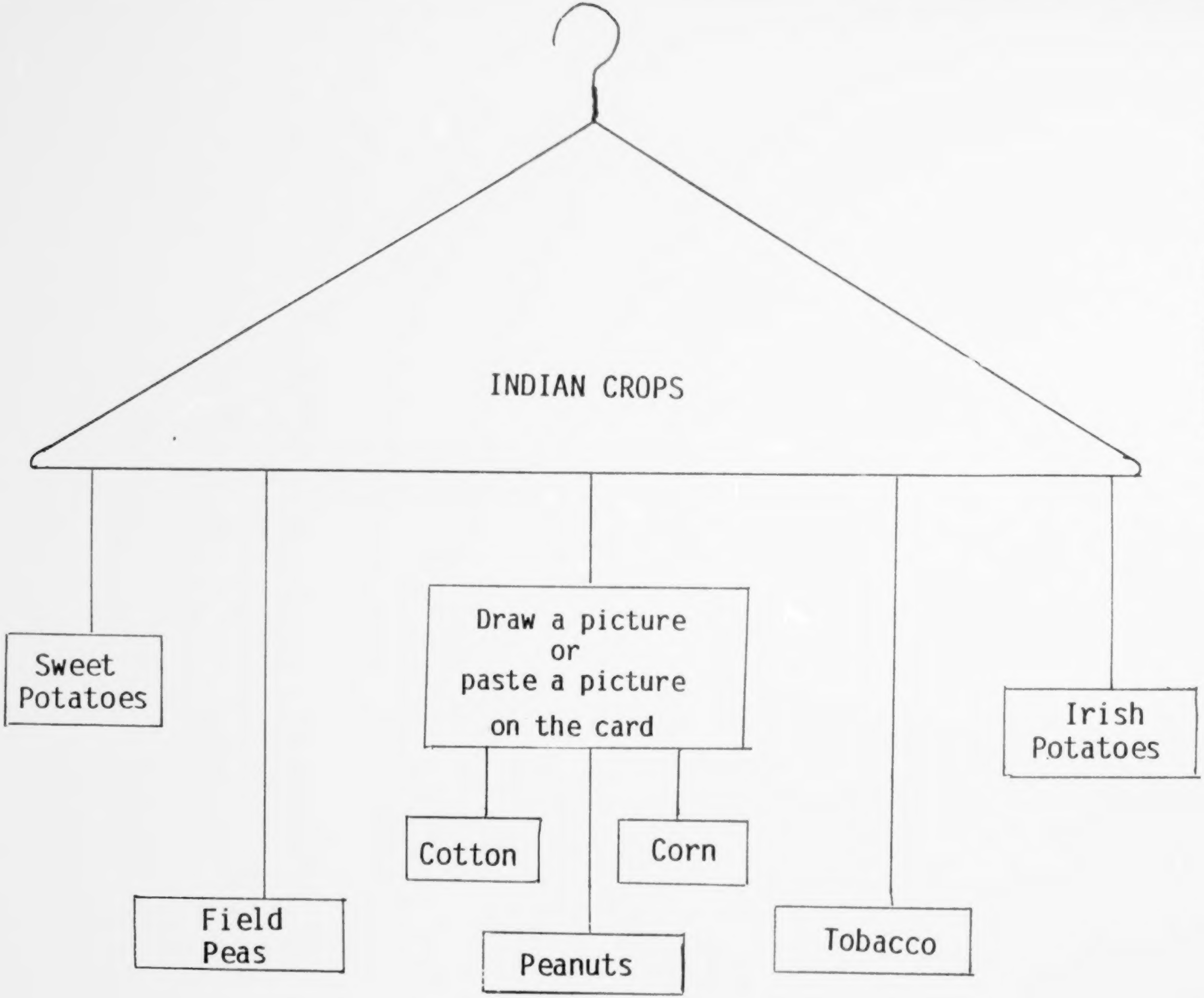
EXTENDED ACTIVITIES

- Have students draw pictures of gardens and foods grown in Georgia.
- Take students to visit a cotton farmer, or have a cotton farmer bring in samples of his crop.
- Ask students to find in their homes items made from cotton materials.
- Incubate and hatch a chicken egg. A small incubator can be acquired from a feed and seed store.

Worksheet 1-1, Unit I, K-2, Lesson 1

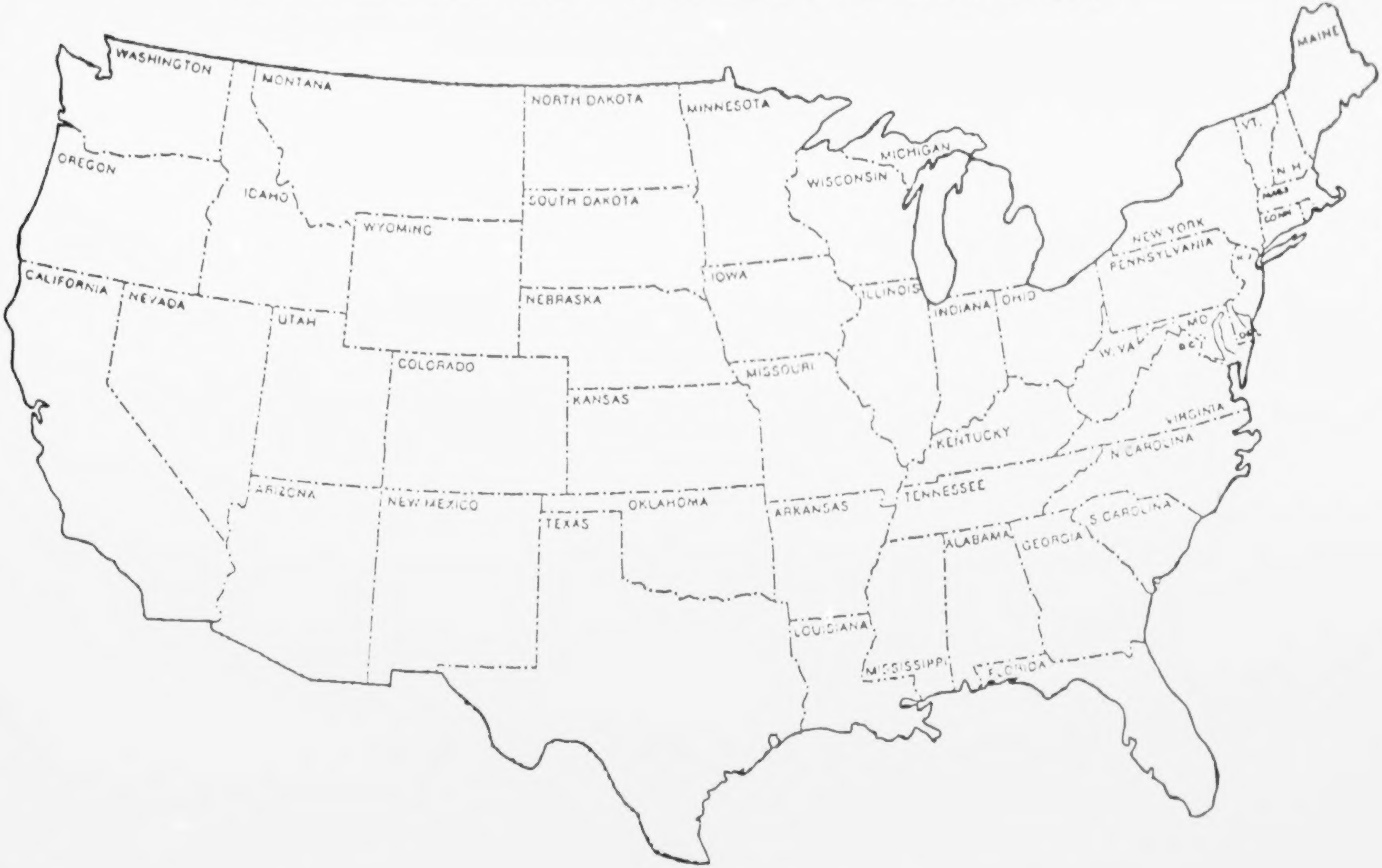

OLD WORLD CROPS
Draw a picture
or
paste a picture
on the card
Sorghum
Peaches
Barley
Oats
Wheat
Velvet Beans
Sugar Cane
Rye
Soy Beans

Worksheet 1-2, Unit I, K-2, Lesson 1


INDIAN CROPS
Draw a picture or paste a picture on the card
Sweet Potatoes
Field Peas
Cotton
Peanuts
Corn
Tobacco
Irish Potatoes

WHERE IS YOUR STATE?

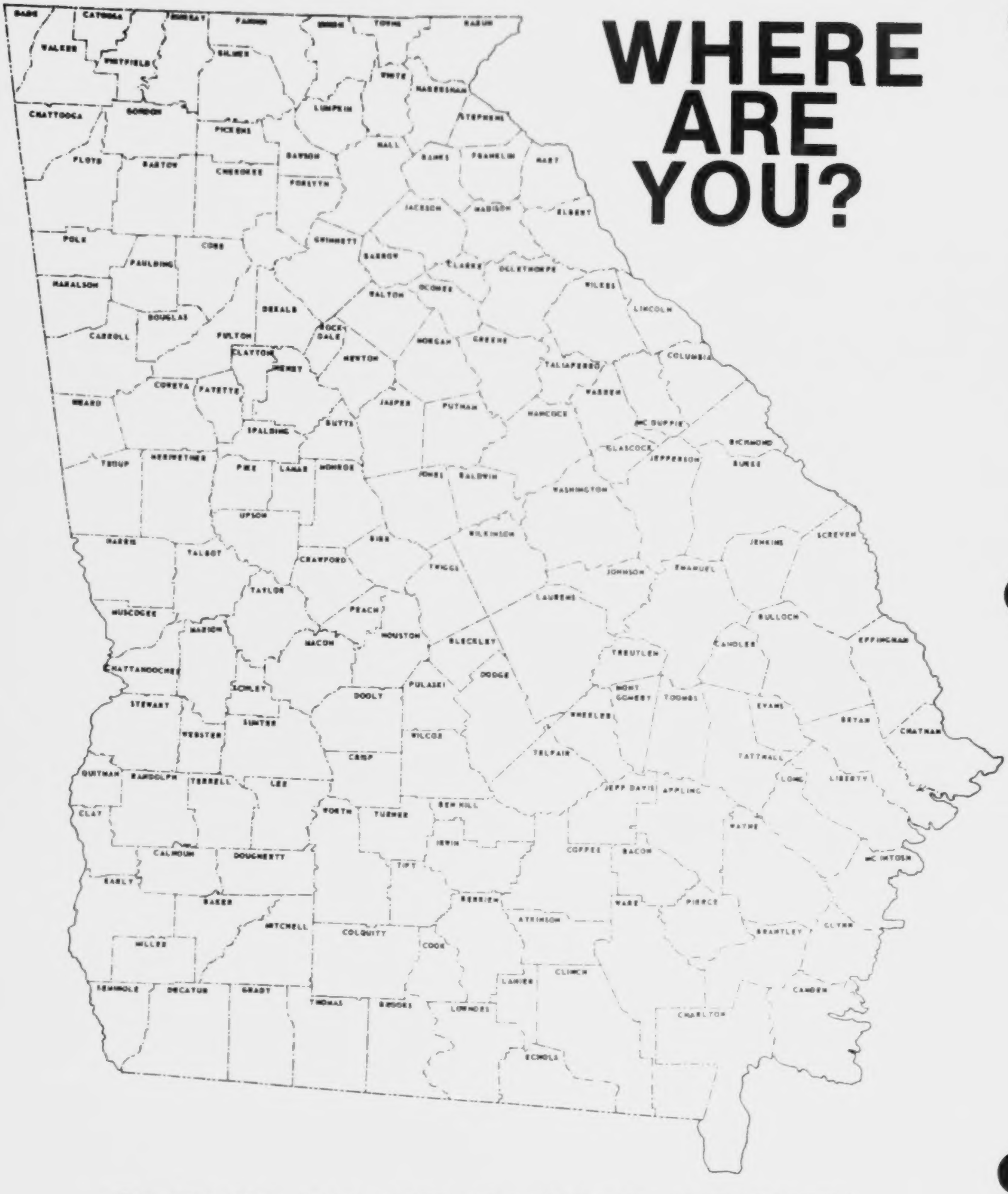
Worksheet 1-3, Unit I, K-2, Lesson 1


WASHINGTON
MONTANA
NORTH DAKOTA
MINNESOTA
MAINE
OREGON
IDAHO
WYOMING
SOUTH DAKOTA
WISCONSIN
MICHIGAN
VT.
N.H.
MASS
CONN
NEW YORK
PENNSYLVANIA
N.J.
CALIFORNIA
NEVADA
UTAH
IOWA
NEBRASKA
ILLINOIS
INDIANA
OHIO
MD
DEL
W. VA.
D.C.
COLORADO
KANSAS
MISSOURI
KENTUCKY
VIRGINIA
N. CAROLINA
ARIZONA
NEW MEXICO
TEXAS
OKLAHOMA
ARKANSAS
TENNESSEE
S. CAROLINA
ALABAMA
GEORGIA
LOUISIANA
MISSISSIPPI
FLORIDA

PLEASE FIND GEORGIA ON THE UNITED STATES MAP

Worksheet 1-4, Unit I, K-2, Lesson 1

WHERE ARE YOU?


DADE
CATOOSA
MURRAY
FANNIN
UNION
TOWNS
RABUN
WALKER
WHITFIELD
GILMER
WHITE
HABERSHAM
CHATTOOGA
GORDON
LUMPKIN
STEPHENS
PICKENS
HALL
FLOYD
BARTOW
CHEROKEE
DAWSON
FORSYTH
BANKS
FRANKLIN
HART
JACKSON
MADISON
ELBERT
POLK
COBB
GWINNETT
BARROW
PAULDING
CLARKE
OGLETHORPE
HARALSON
OCONEE
WALTON
WILKES
LINCOLN
DOUGLAS
DEKALB
ROCK DALE
CARROLL
FULTON
MORGAN
GREENE
CLAYTON
HENRY
NEWTON
COLUMBIA
TALIAFERRO
COWETA
FAYETTE
HEARD
JASPER
PUTNAM
WARREN
HANCOCK
BUTTS
SPALDING
MC DUFFIE
GLASCOCK
RICHMOND
JEFFERSON
BURKE
TROUP
MERIWETHER
PIKE
LAMAR
MONROE
JONES
BALDWIN
WASHINGTON
UPSON
HARRIS
TALBOT
BIBB
WILKINSON
JENKINS
SCREVEN
CRAWFORD
TWIGGS
JOHNSON
EMANUEL
TAYLOR
LAURENS
MUSCOGEE
PEACH
BULLOCH
MARION
HOUSTON
MACON
BLECKLEY
CANDLER
EFFINGHAM
CHATTAHOOCHEE
TREUTLEN
SCHLEY
PULASKI
DODGE
MONT GOMERY
TOOMBS
EVANS
STEWART
DOOLY
WHEELER
BRYAN
CHATHAM
SUMTER
WEBSTER
WILCOX
TELFAIR
TATTNALL
CRISP
QUITMAN
RANDOLPH
TERRELL
LEE
LONG
LIBERTY
JEFF DAVIS
APPLING
BEN HILL
CLAY
WORTH
TURNER
WAYNE
IRWIN
CALHOUN
DOUGHERTY
COFFEE
BACON
MC INTOSH
TIFT
EARLY
BAKER
BERRIEN
WARE
PIERCE
ATKINSON
MITCHELL
COLQUITT
BRANTLEY
GLYNN
MILLER
COOK
CLINCH
LANIER
SEMINOLE
DECATUR
GRADY
THOMAS
BROOKS
LOWNDES
CAMDEN
CHARLTON
ECHOLS

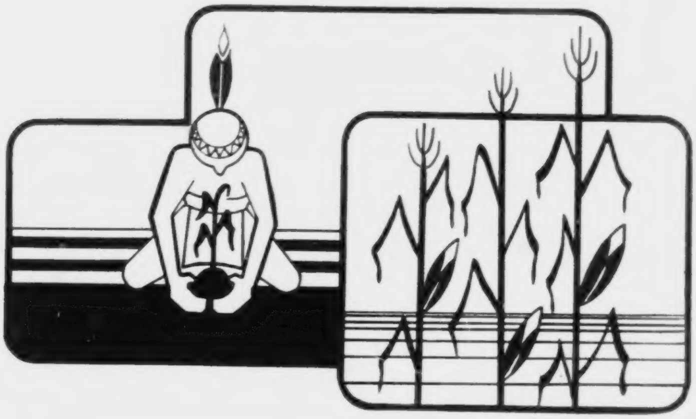
PLEASE COLOR IN YOUR COUNTY

Worksheet 1-5, Unit I, K-2, Lesson 1

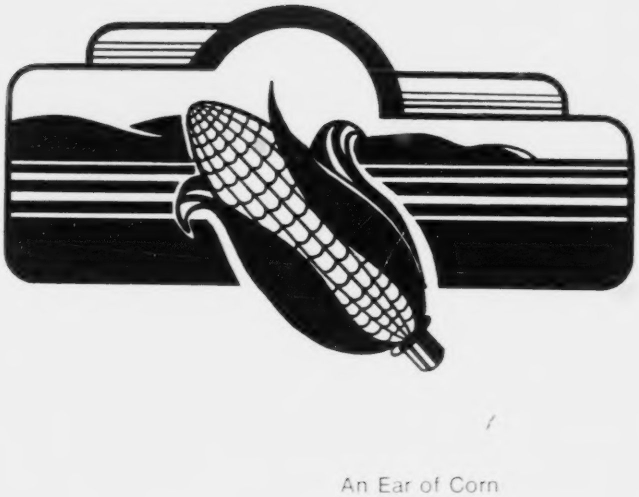
What is corn?

The Indians showed the early settlers how to plant corn. Corn is an important food, for it can be used as a vegetable or it can be ground into meal to make bread.

Corn is an important food for farm animals.



Corn

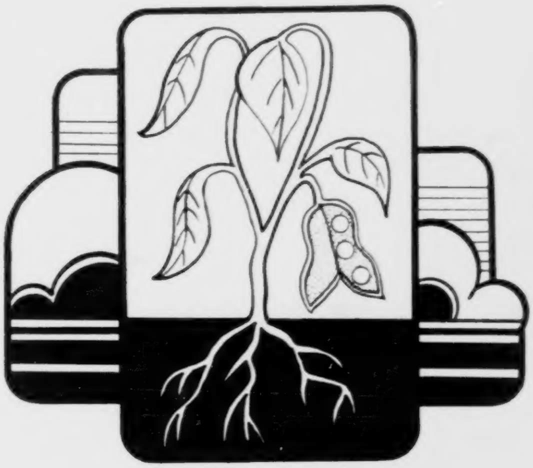


An Ear of Corn

Worksheet 1-6, Unit I, K-2, Lesson 1

What are soybeans? Can you name some foods that we get from soybeans?

Soybeans were brought to the New World by the early settlers.



Soybean Plant

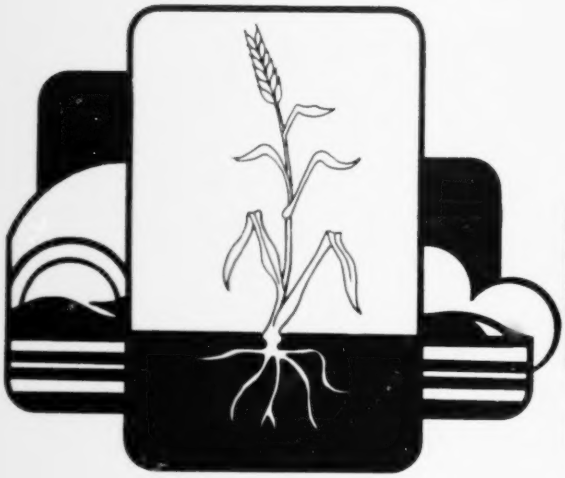
Soybean oil is the main ingredient in most margarines, solid shortenings, salad oils, and cooking oils. It is also used in preparing dressings, frozen foods, cake and cookie mixes, soups, and candies.

Soybean oil is as good for you as any oil can be. Soybean oils are like all vegetable oils in that they have no cholesterol. Too much cholesterol can cause health problems for some people.

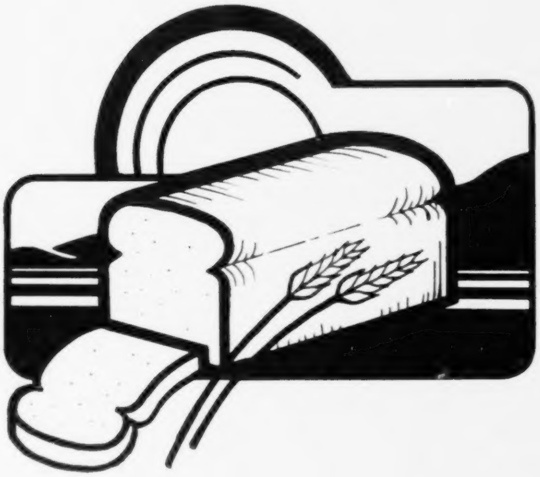
Worksheet 1-7, Unit I, K-2, Lesson 1

Can you name a plant from which bread is made?

Wheat plants were brought to the New World by settlers from the Old World.



A Wheat Plant



Bread

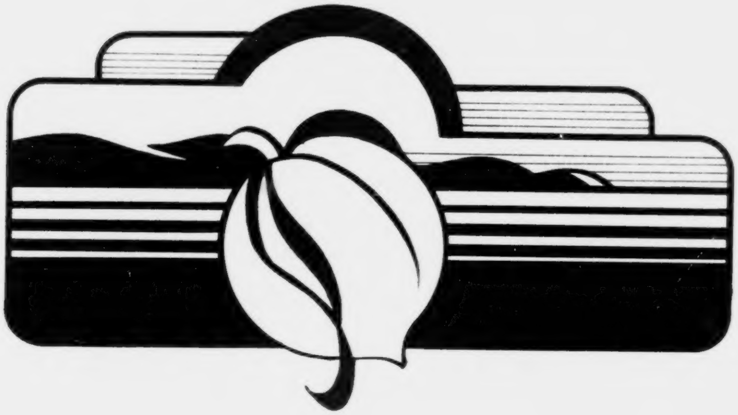
Worksheet 1-8, Unit I, K-2, Lesson 1

What is a peach?

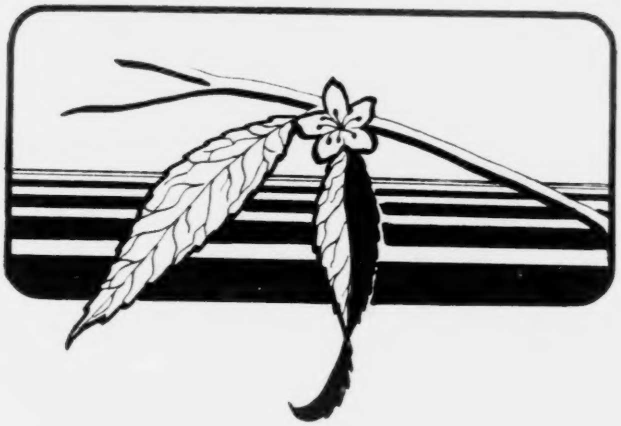
Peaches have been an important crop in Georgia. Georgia was once known as the Peach State.

Peaches grow on trees. They were brought from the Old World.

The peach is a fruit. Peach trees have beautiful flowers on them in the spring.



A Georgia Peach



A Georgia Peach Blossom

Worksheet 1-9, Unit I, K-2, Lesson 1

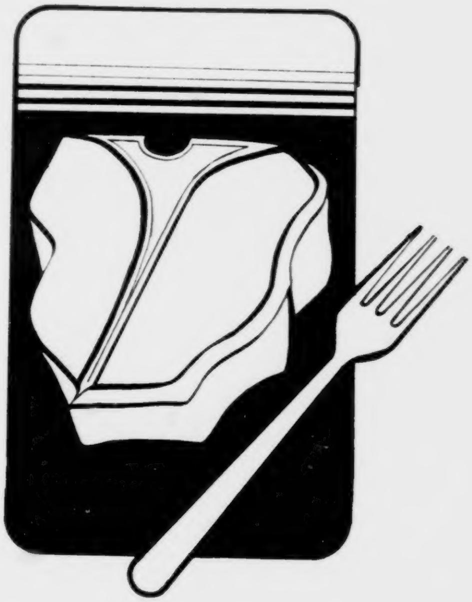
What is beef?

Name the meats we buy in the stores that come from beef cattle.

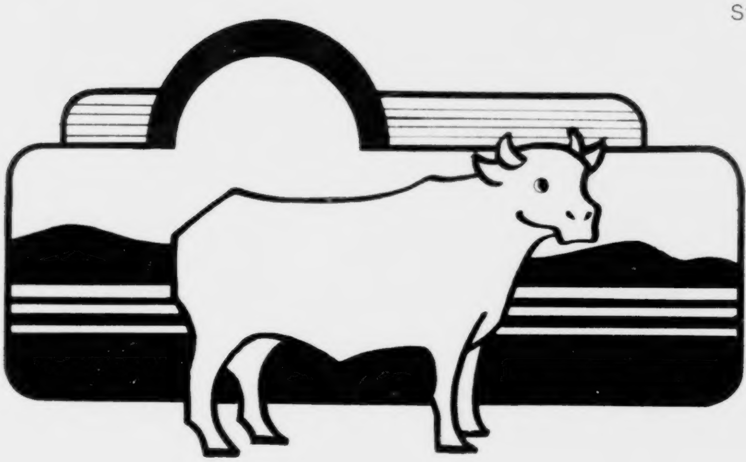
Cows were one of the animals brought to the New World by the early settlers.

Beef cows are different from milk cows.

These are cows used for beef.



Steak



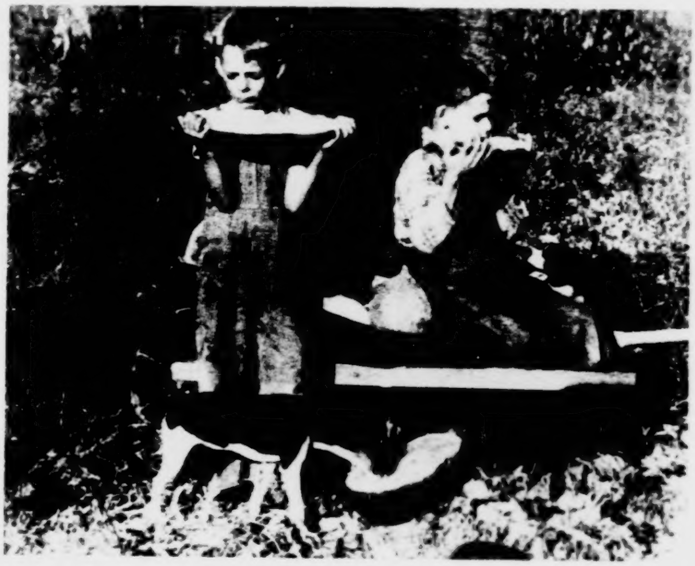
A Cow

Worksheet 1-10, Unit I, K-2, Lesson 1

What is a melon?

The early settlers in the New World raised melons in large quantities. People have continued to grow melons to eat.

Melons grow on vines in large fields. Most people buy melons now in the supermarkets.



Boys Enjoying Watermelon

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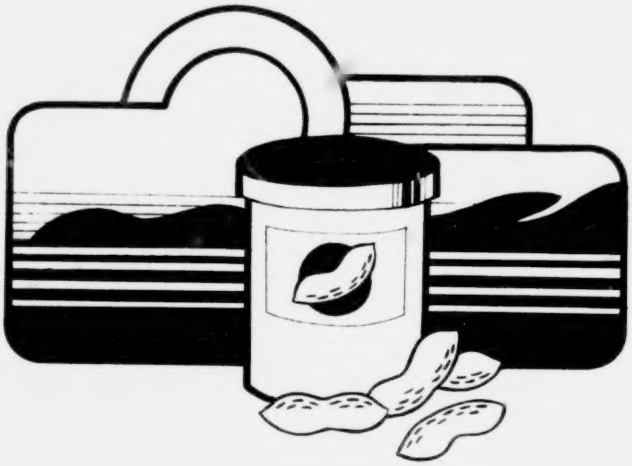
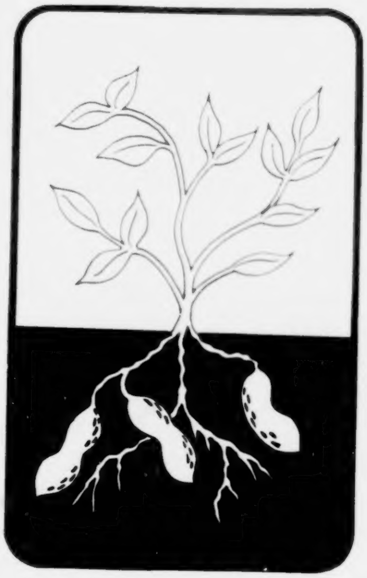
Worksheet 1-11, Unit I, K-2, Lesson 1

What are peanuts?

Can you name the foods that are made from peanuts?



Peanut Butter



The Indians showed the early settlers how to grow peanuts.

A Peanut Plant

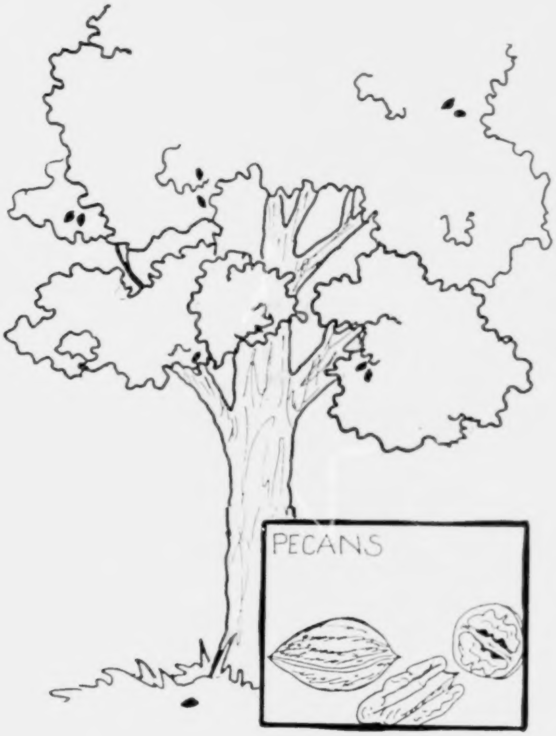
Worksheet 1-12, Unit I, K-2, Lesson 1

What is a pecan?

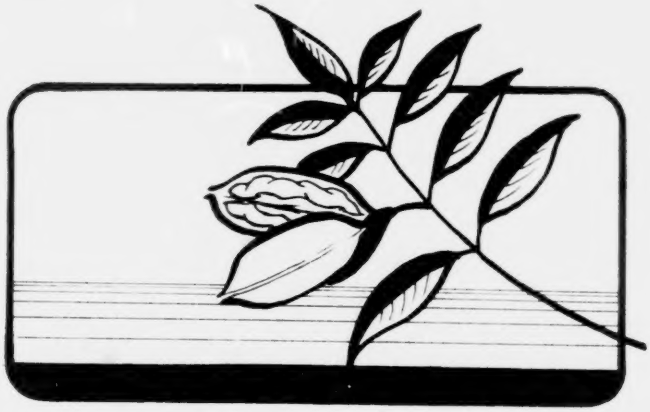
Did you know there are different kinds of pecans?

Pecans are nuts that grow on trees. These nuts have been an important crop for Georgia farmers.

Pecan trees grow well in South Georgia.



Pecan Tree and Pecans



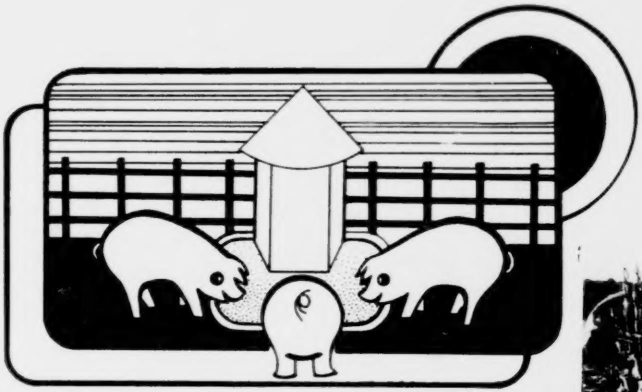
Pecan Tree Branch and Nuts

Worksheet 1-13, Unit I, K-2, Lesson 1

Can you name the foods that come from pigs?

When pigs grow up they become hogs. Pig and hog meats are called pork. Ham and bacon come from hogs.

Hogs were brought to the New World by the early settlers.



Hogs Feeding in the Barn Lot

Hogs in a Corn Field after
Harvesting Season

Baby Poland China Pigs Nursing
(Breed of pigs with black spots)

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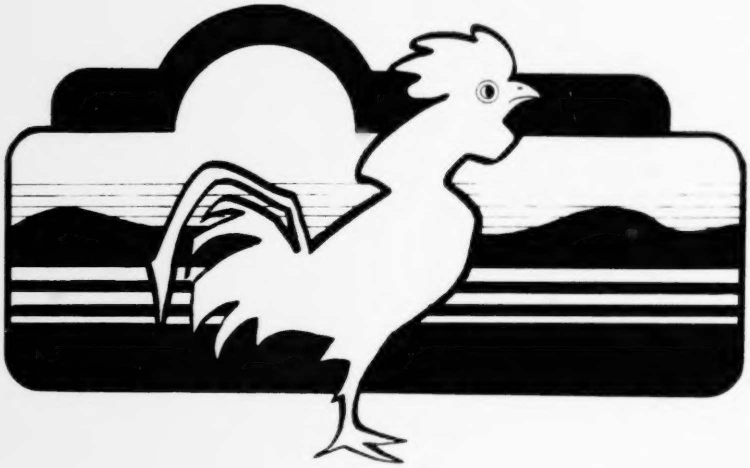
Worksheet 1-14, Unit I, K-2, Lesson 1

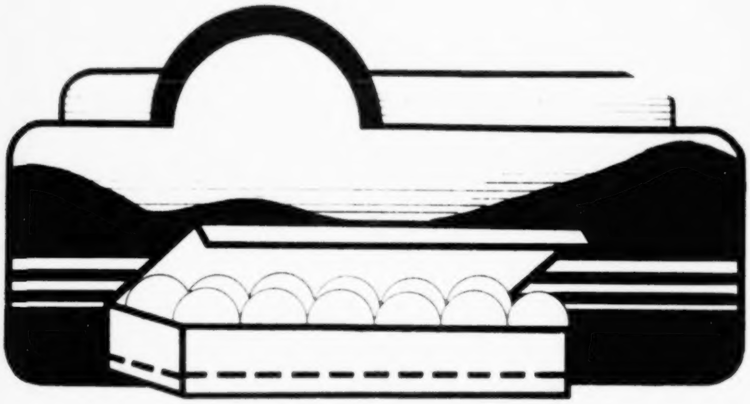
What is poultry?

Turkeys and chickens are called poultry animals. Settlers in the early days found wild turkeys in the New World. Today many chickens are grown in Georgia.

Females are called hens, and they lay eggs. Males are called roosters.



Chicken on the Farm



Chicken and Eggs
Important Poultry Products

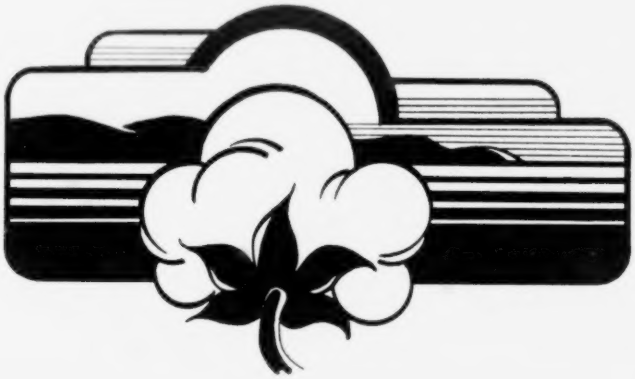
Worksheet 1-15, Unit I, K-2, Lesson 1

What is cotton?

Cotton is a plant that has white fibers. The fibers are used to make thread and cloth for the clothes we wear.

Cotton was important to the early settlers because they did not have many materials for making clothes.

Cotton is a soft, cool fabric to wear in hot weather.



An Open Cotton Boll

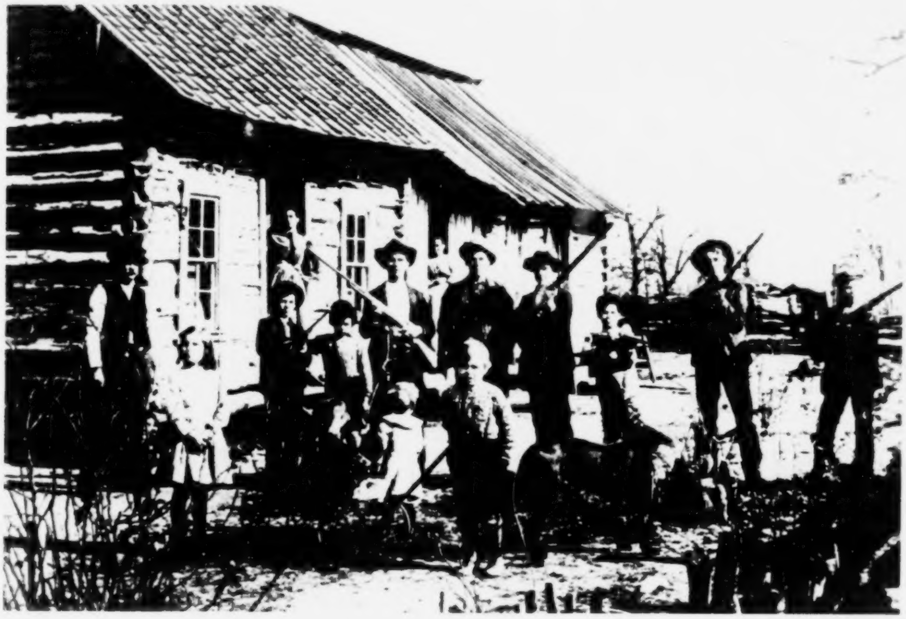
Worksheet 1-16, Unit I, K-2, Lesson 1

How did farm families dress a hundred years ago?

Look at the picture and name some of the differences in dress then and the way you dress now.

How is the house different from your house?

What materials were used to build houses in early days?



An Old Farmstead — Log House, Log
Fences; a Large Family, Each in
Early Dress

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Worksheet 1-17, Unit I, K-2, Lesson 1

What is a country store?

The country store was a place where farmers could buy practically all the things they did not raise — from wash tubs to materials for dresses.

The country store was also a gathering place for getting the news.

There are still some country stores. How are they different from the stores in which we shop in the cities today?

A Country Store

Have a Coke
Dr. Pepper
Coca-Cola

A Visit on the Steps of a Country Store

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LESSON 2: Farm Homes and Family Life

PRINCIPLE: Farm homes and family life have changed over time.

OBJECTIVES

The student will be able to

- compare farms of the past with those of today.
- describe the life of a farm family among the early settlers.
- discuss why fewer people live on farms today.

BACKGROUND NOTES

The early settlers did not have an easy life. Everyone had to work on the farm, including the children. They worked long hours and took many risks, because their crops depended on the weather and other factors over which they had no control. The women took care of the family, cooked, and helped in the fields. There were no electricity and very few machines to help with the work and make it easier.

The pioneers made their own soap. They had to make candles because there was no electricity. After raising cotton in the fields, the farm women used the fiber to make thread and cloth for clothes and other items such as sheets, curtains, and tablecloths used in a home. There were very few jobs outside the home. One might, for example, be a servant or a teacher.

Virtually everyone lived on the farm and worked there. It took many people, before the invention of farm machines, to do the work on a farm. Machines in the farm home that help with the house cleaning, and machines in the fields that help plow the soil and gather the crops have made farming easier. As a result, not so many people are needed as in early days to raise enough food and fiber to meet our needs.

Farming still involves many risks because the farmer is dependent upon the weather and the market price he can get for his crops. Farm work is also confining because crops and animals need continuous attention. Farmers in the early days raised practically everything they needed. Farmers today specialize in one or a few crops, sell the products, and buy the things they need and want.

MATERIALS AND AIDS

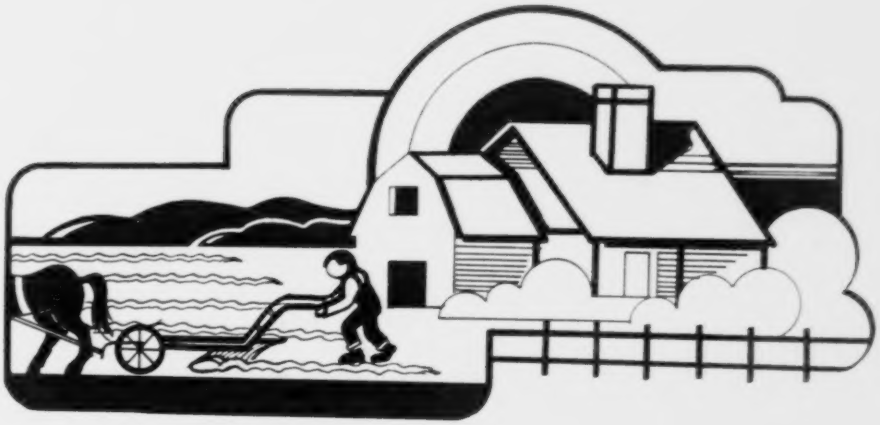
- worksheets 1-18 through 1-27
- candles
- pictures of farm machines
- pictures of farm animals

ACTIVITIES

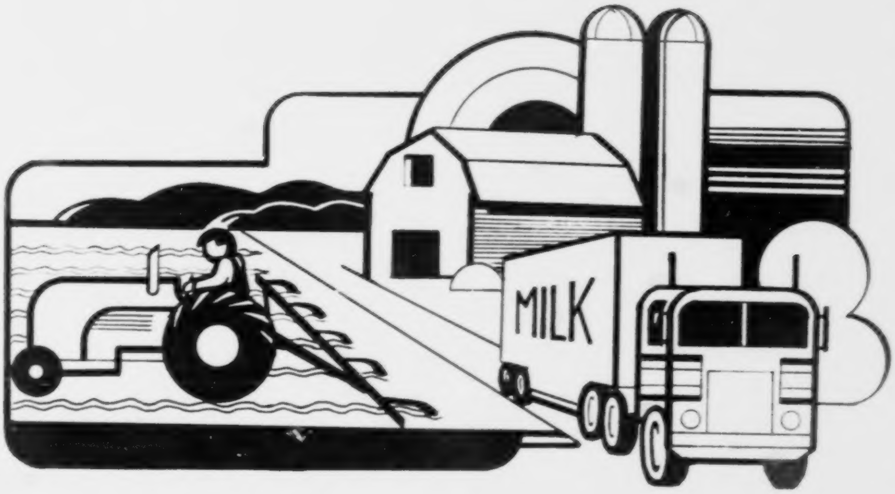
- Use Worksheet 1-18 to show pupils the difference in farms in pioneer days and today. Students will compare the buildings, machines, animals, and people in the two pictures.
- Use Worksheet 1-19 to show pupils the difference in the work children did in pioneer days and the jobs they do at home now. These pictures can also lead to a discussion of differences in clothes worn.
- Use Worksheet 1-20 to show how farmers can gather the cattle from a large pasture into a corral.
- Use Worksheet 1-21 to lead students into a discussion of how honey is gathered and the reasons the farmer must wear special clothes.
- Use Worksheet 1-22 to discuss the types of work done on a plantation.
- Use Worksheet 1-23 to compare the way the wash was done in the early days to the way clothes are washed today.
- Use Worksheet 1-24 to compare pioneer kitchens to today's kitchens.
- Use Worksheet 1-25 to lead to discussions about the changes in heating and cooking in the home throughout the years.
- Use Worksheet 1-26 to discuss the importance of water to survival, and the different ways people have obtained water.
- Use Worksheet 1-27 to discuss the ways people have cooked and to compare a barbecue one hundred years ago to a barbecue today.

Worksheet 1-18, Unit I, K-2, Lesson 2

This is how a farm looked in pioneer days.



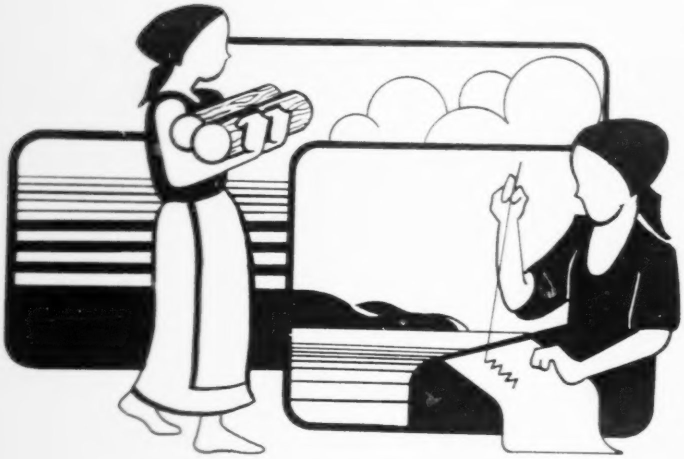
This is how a farm looks now. How is the farm different today?

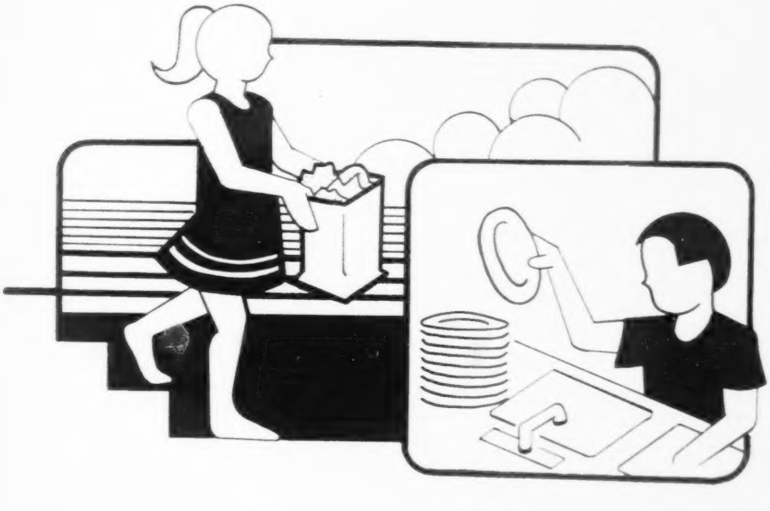


Worksheet 1-19, Unit I, K-2, Lesson 2

How is the work children do today different from the work of children in pioneer days?

Tell what the children are doing in each picture.





Worksheet 1-20, Unit I, K-2, Lesson 2

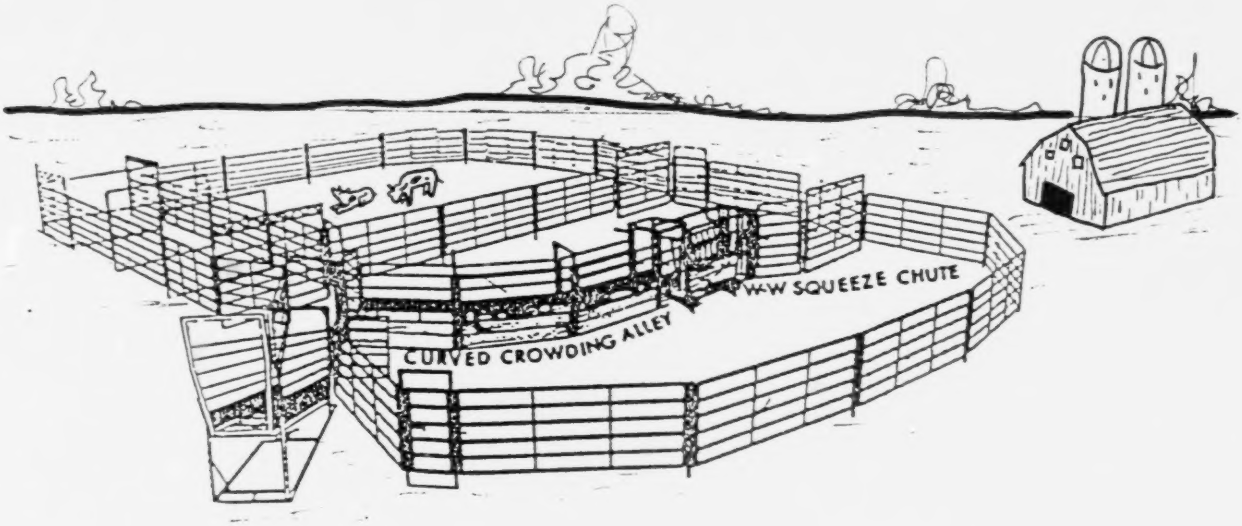
What is a corral?

A corral is a place where cattle farmers can gather the cattle from a large pasture into a small fenced-in area.

The corral is used for gathering (collecting) the animals for loading onto trucks when the animals need to be moved to another place.

Can you draw a picture of a corral?

Name some animals that you think would be put in a corral.

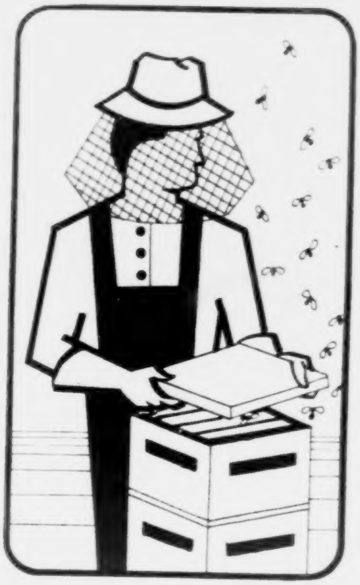


Worksheet 1-21, Unit I, K-2, Lesson 2

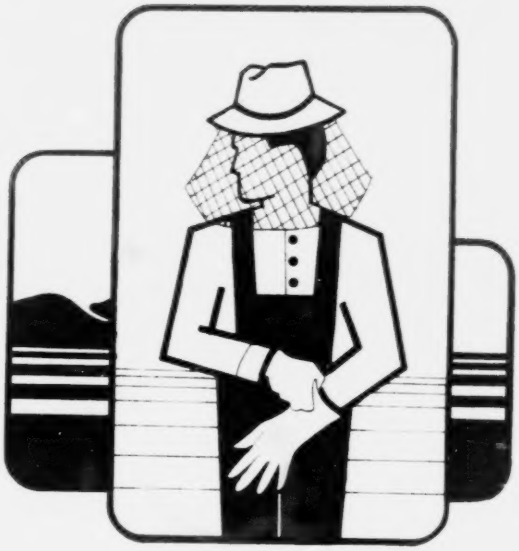
Where do we get honey?

Honey comes from bees. On farms bees live in boxes called hives.

The farmer who raises bees has to wear special clothes to get the honey. Why do you think the special clothes are necessary?



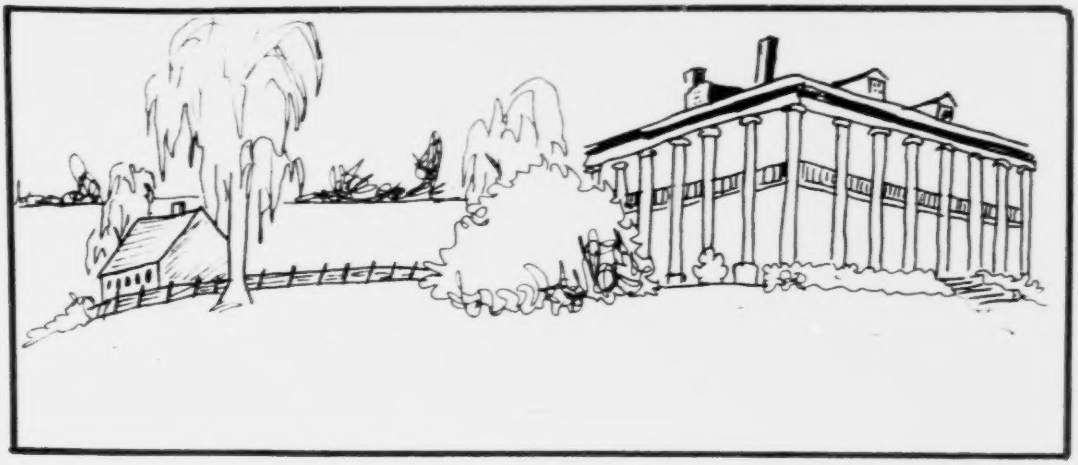
Farmer "Robbing" the Beehive

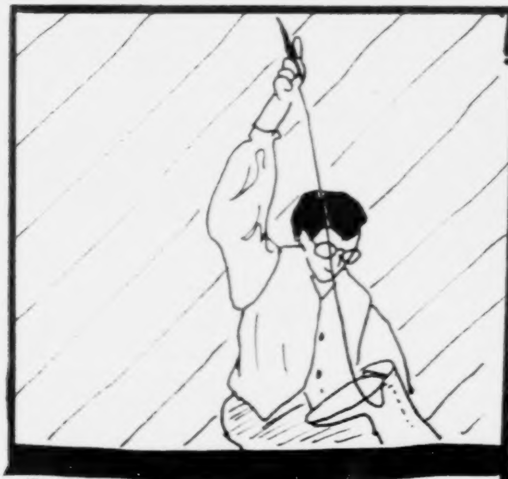


Farmer Dressed for Gathering Honey

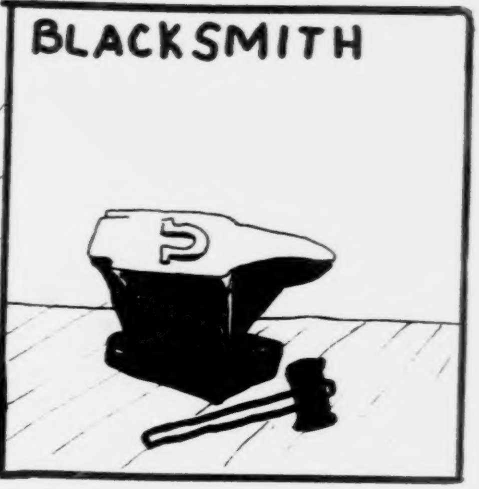
Worksheet 1-22, Unit I, K-2, Lesson 2

Big farms were called plantations in pioneer days. Most needs were filled by workers on the plantation.





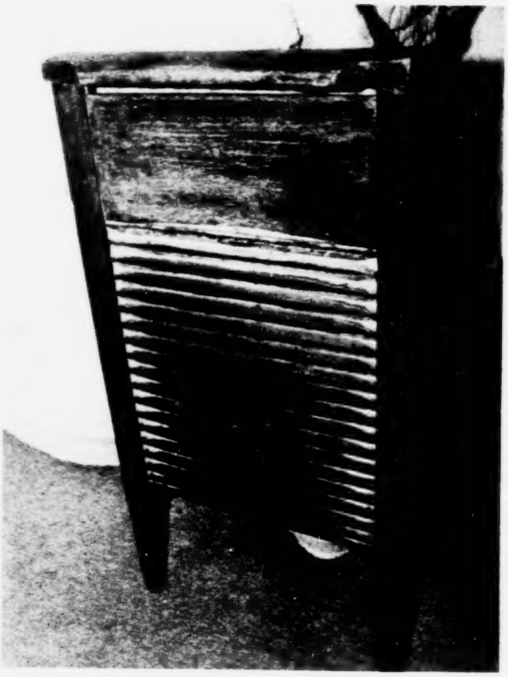
BOOT&SHOE MAKER



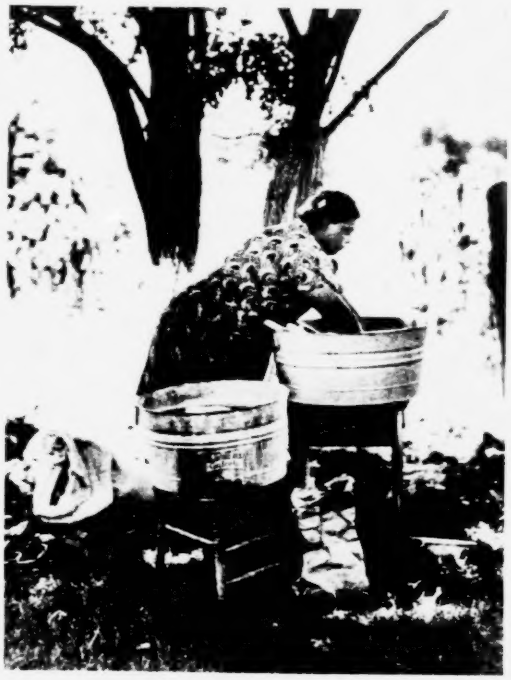
Worksheet 1-23, Unit I, K-2, Lesson 2

How do people wash clothes?

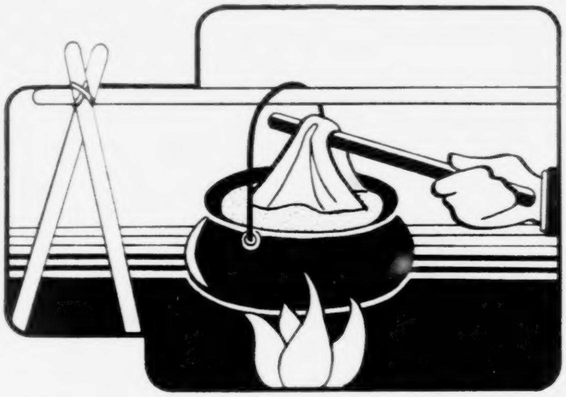
The early settlers washed clothes in rivers or streams. Later they did the laundry in tubs with rubbing boards like the one in the picture below. Today people use automatic washers and dryers to wash and dry their clothes.



The Rub Board — Early Clothes Washing Device (From Georgia Power's Heritage Program Collection)



Early Clothes Washing in Tub (Copyright by PROGRESSIVE FARMER; February 1986; Requested with Permission)



Clothes were often boiled in a wash pot to loosen dirt and were also scrubbed on the board. They were hung on a line to dry.

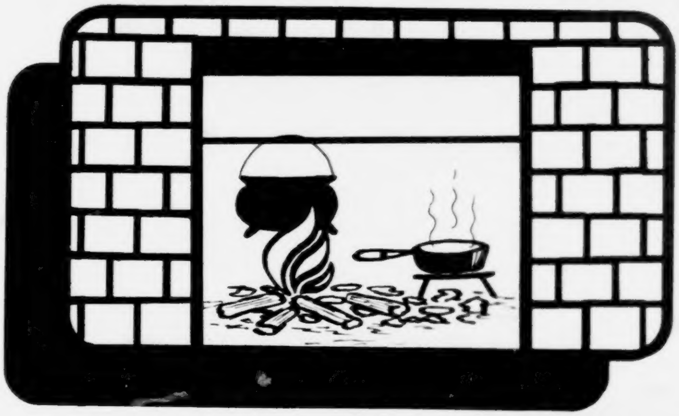
Worksheet 1-24, Unit I, K-2, Lesson 2

Can you describe a pioneer kitchen?

The first picture shows how families cooked in open pots over the flames in the fireplace.

How does cooking differ in kitchens of today?

How do the utensils differ in the kitchen of today?

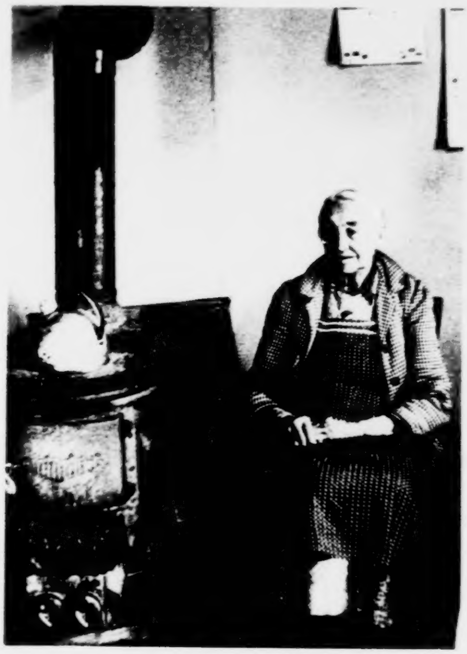


This scene from Georgia Power's Heritage Program collection shows a rub board, waffle iron, butter mold, and other utensils and equipment used on early farms.

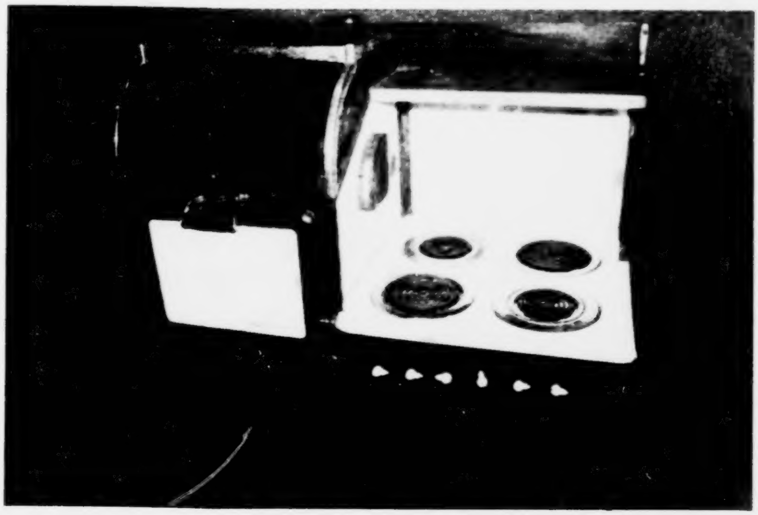
Worksheet 1-25, Unit I, K-2, Lesson 2

What is a potbellied stove? This stove has a rounded or bulging body. How is it different from an electric stove?

In the early days after people stopped cooking on fireplaces, they started using stoves like the one in the picture. The stove also heated the house. A kettle of water on the stove provided moisture and prevented the heat from drying the air.



An Elderly Woman Staying Warm by the Potbellied Stove While Her Hot Water Kettle Boils (Copyright by PROGRESSIVE FARMER, February 1986; Requested with Permission)

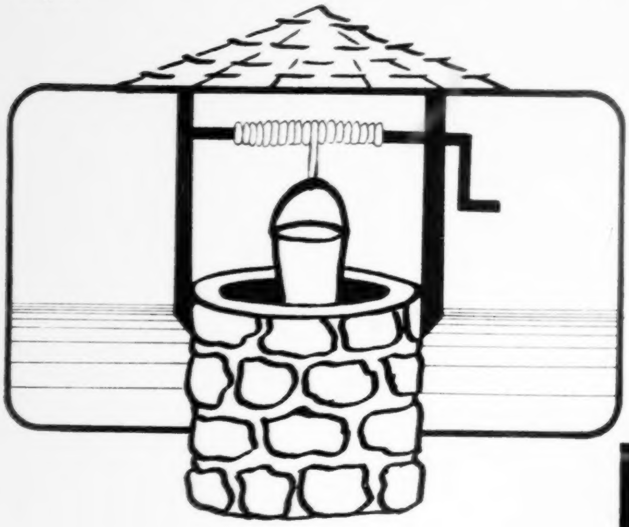


An Early Electric Stove (From Georgia Power's Heritage Program Collection)

Worksheet 1-26, Unit I, K-2, Lesson 2

People cannot survive without water. People who came to the New World settled and made their homes where they could get water. The settlers got water from springs and rivers. Later they dug wells.

How is the way you get water different from the way people got water in the early days?



An Early Well-Water
Drawn by Hand

An Early Hand Pump for Pumping
Water from the Ground

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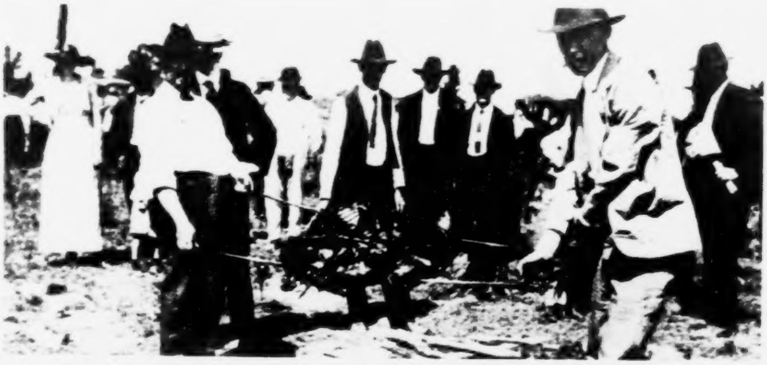
Worksheet 1-27, Unit I, K-2, Lesson 2

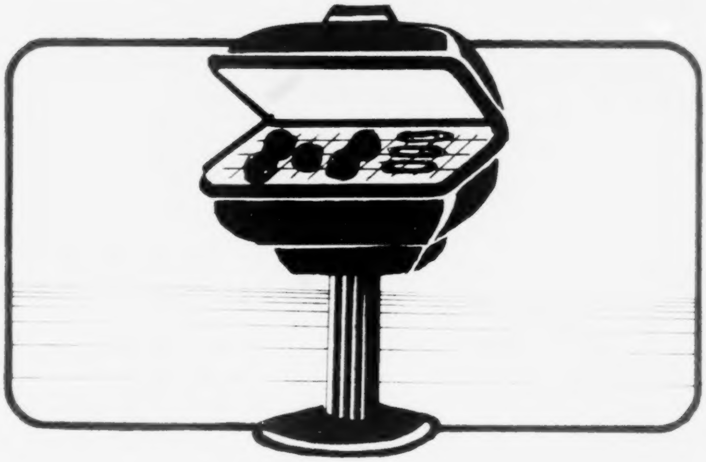
What is a barbecue?

These people are having a barbecue in the early days. How is the barbecue different from the barbecues people have today?

How are the clothes different from the clothes you wear to a barbecue?



A Georgia Barbecue During Early 1900s
(University of Oklahoma Library)
(Copyright by PROGRESSIVE FARMER, February 1986; Requested with Permission)



Barbecue Grill Used in 1980s

LESSON 3: Technological Changes on Farms

PRINCIPLE: Technology has changed production and distribution of agricultural products.

OBJECTIVES

The student will be able to

- list the ways in which transportation is important to farmers.
- explain how transportation changes served agricultural needs previously.
- describe how communities and transportation centers developed together.
- describe the farm machines that have replaced animals and people in farm production.

BACKGROUND NOTES

The effect of the changes in transportation methods was very important to farmers in marketing their products. Most farm products must be moved to market while they are fresh, or the farmer will lose his profit in spoiled goods. The many rivers in Georgia were "natural" roads for the pioneers. Between the rivers were cut trails, which were called blazes. The trails became known as blazed trails. Trading posts were set up. These posts, or places of trading, later became towns.

The trails slowly were built into roads on which stagecoaches and wagons could travel. Later the railroad was developed. The first railroad constructed in Georgia connected Athens with Augusta. It was chartered in 1833 and completed in 1841. Some of the people were afraid the railroads would cause their property to decrease in value, but when the railroads were extended to connect important centers within the state, important cities were established. Atlanta, the capital of Georgia, was originally called Terminus because it was the meeting point of Georgia railroads.

Farm machines replaced human and animal labor and early tools. The hoe was an important tool used for digging, which can now be done by machines. Before irrigation machines were invented, a drought could kill a farmer's crops. The tractor and harrow replaced the mule and plow. Picking cotton was a strenuous job by hand that now can be done by machine.

MATERIALS AND AIDS

worksheets 1-28 through 1-35
pictures of farm machines
pictures of railroads
pictures of farm animals
pictures of ships
pictures of airplanes

ACTIVITIES

- Use Worksheet 1-28 to discuss the various methods of transportation and why dependable, fast transportation is important to farmers.
- Use Worksheet 1-29 to discuss the ways animals were used for transportation.
- Use Worksheet 1-30 to describe how Atlanta, Georgia, was established as a result of transportation methods, and to illustrate the farmer's market today.
- Use Worksheet 1-31 to describe a farm machine that replaced hand labor.
- Use Worksheet 1-32 to show both past and modern farm production methods.
- Use Worksheet 1-33 to show students the hoe, a very important tool that is still being used on small jobs on farms today, but on big farms has been replaced by machines.
- Use Worksheet 1-34 to show how farmers can use irrigation machines to put water on crops when there is not enough rain.
- Use Worksheet 1-35 to show a comparison of milking cows by hand and by machine.

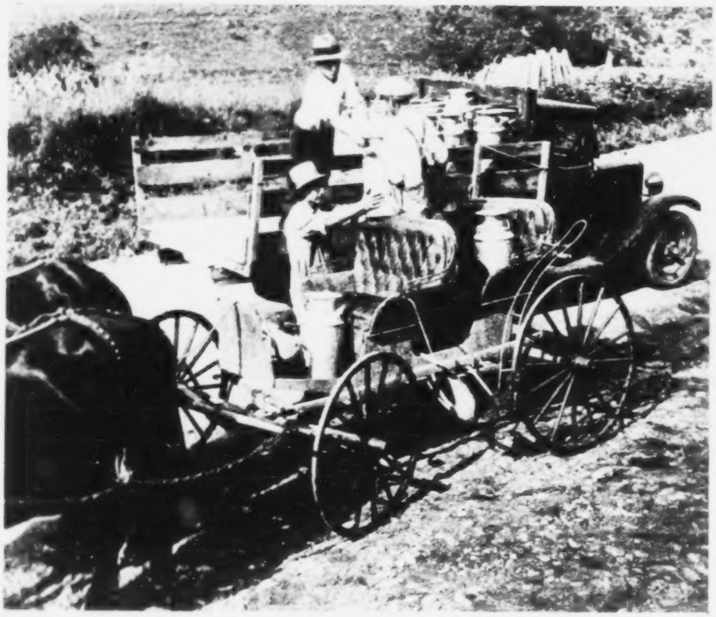
Worksheet 1-28, Unit I, K-2, Lesson 3

How has transportation changed since the early days?

In the early days, people traveled over land on horseback or in wagons. Later they were able to travel on trains and in cars or trucks.

Traveling by Horseback

Going to Town Near Anderson, SC, in the 1920's



(Right) Delivering Milk in the Milk Truck in Ashe County, North Carolina, in 1929

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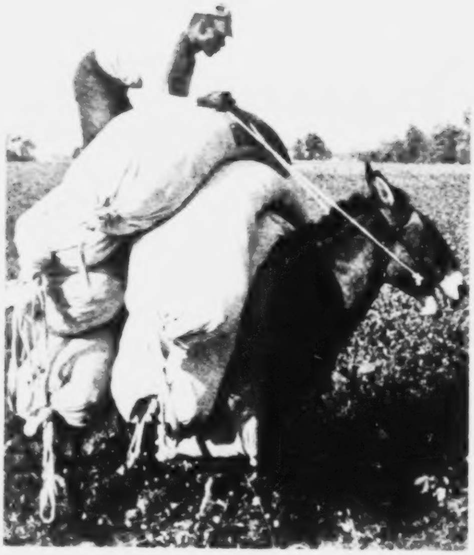
Worksheet 1-29, Unit I, K-2, Lesson 3

How are these animals being used for transportation?

How is transportation different today from transportation in the early days?

(Below) Mule loaded (overloaded) with cotton sacks



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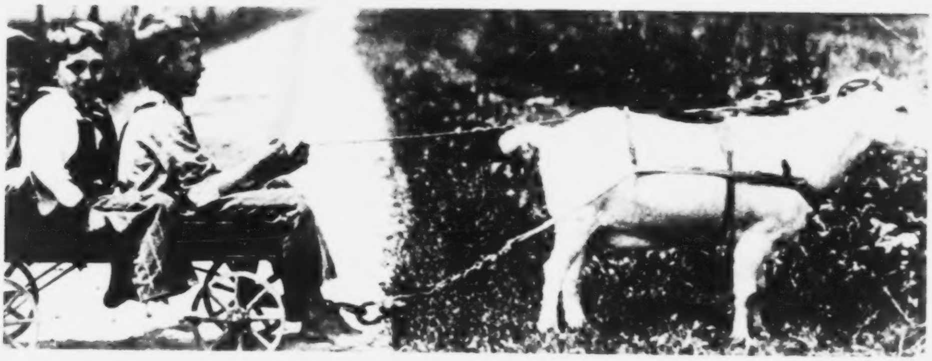
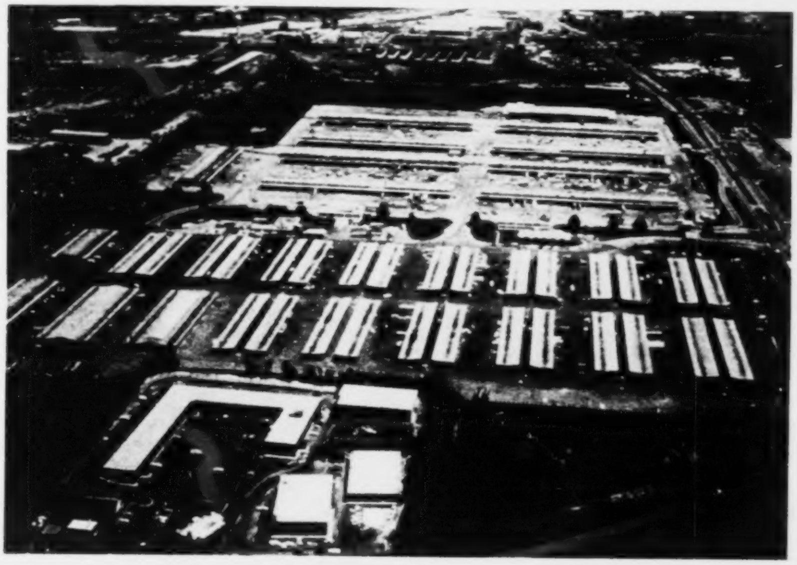


(Left) Goat Power on a rural road in the 1940's

Worksheet 1-30, Unit I, K-2, Lesson 3

Early Atlanta was called Terminus. Do you know why it was called Terminus?

Atlanta of today is a large, modern city with many transportation methods, much industry and trade. The picture below show the large state farmer's market — a view from the air and a close view of the many fresh farm products one can buy there.



Georgia State Farmer's Market, 1980

Worksheet 1-31, Unit I, K-2, Lesson 3

What is a cotton-picking machine?

Laborers had to stoop with heavy sacks on their backs and pick the cotton from the bolls.

Cotton pickers were paid by how much cotton they picked. Their sacks were weighed at the end of each day, and they were paid for each pound of cotton picked.

(Right) Women in bonnets picking cotton near Rome, Georgia, in early 1900's

Marketing Cotton in Greenville, Texas

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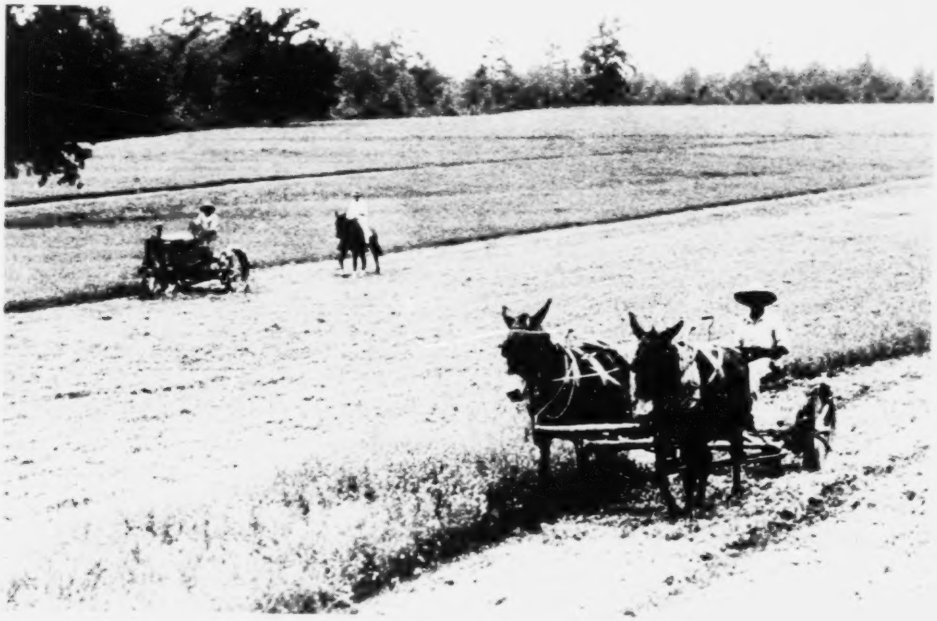
Worksheet 1-32, Unit I, K-2, Lesson 3

Can you see a tractor in this field pulling a machine?

Find the other machine being pulled by animal power. These machines are cutting alfalfa to be used for hay to feed animals.



(Copyright by PROGRESSIVE FARMER: February 1986:
Requested with Permission

Worksheet 1-33, Unit I, K-2, Lesson 3

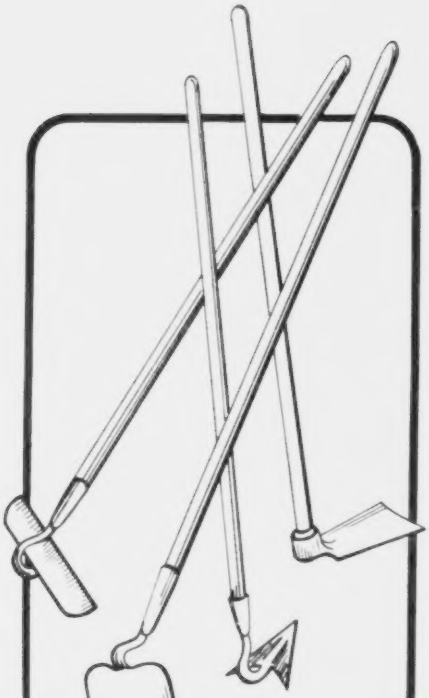
What is a hoe?

The hoe is a farm tool used by farmers to dig the soil and chop weeds. It has been important to farmers since the early days.

The hoe has a long handle attached to a sharp blade which is put on the handle cross-wide. Machines now do many of the jobs that were done with hoes.

A farmer's life in the 1800's revolved around the hoe.

(Copyright by PROGRESSIVE FARMER, February 1986; Requested with Permission)



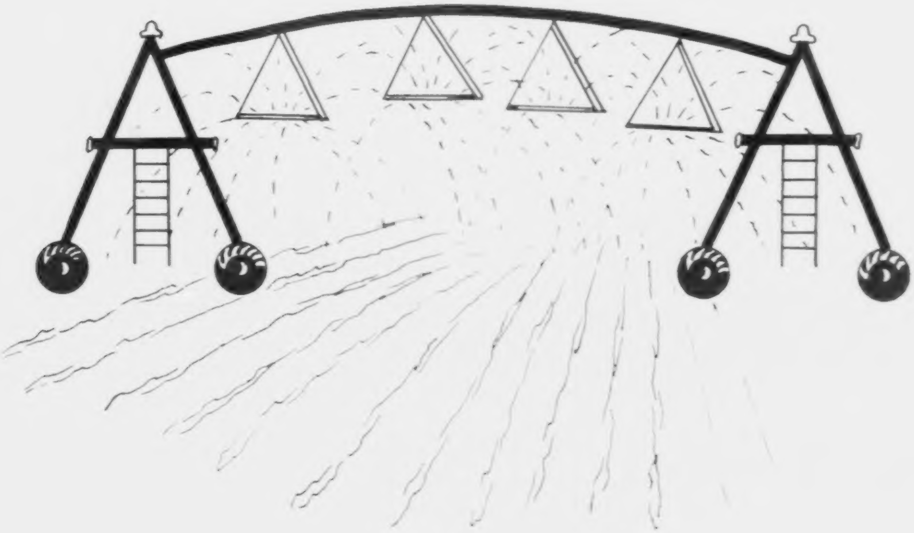
Worksheet 1-34, Unit I, K-2, Lesson 3

What is irrigation?

When there is not enough rain for a farmer's crops, he has to put water on them. One way is to use irrigation machines like the one pictured below.

The water may be pumped from a well, or a nearby lake, or a river.

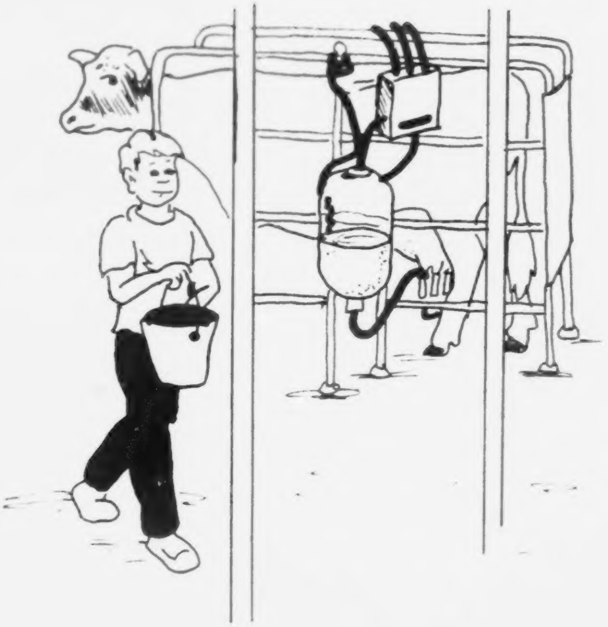
Before farmers had irrigation, they lost their crops when there was not enough rain.



Worksheet 1-35, Unit I, K-2, Lesson 3

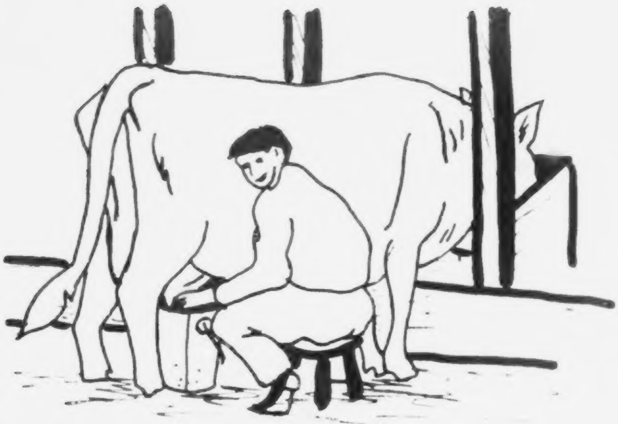
What is a dairy farm?

Dairy farms raise cows to provide milk. Milk is an important food need. A dairy farm is a *special* farm.

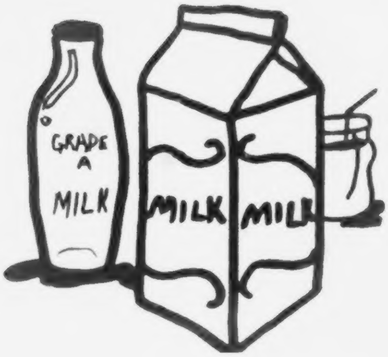


This farmer used a milking machine (right). The machine draws the milk from the cow's udders.

This farmer is milking by hand.



We buy milk in cardboard cartons or in plastic jugs now.



AGRICULTURE IN GEORGIA CLASSROOMS

Grades K-2

UNIT II: The Agricultural System Is Basic to Human Needs

TIME: 2 to 3 Weeks (4 Lessons)

PURPOSE

This unit is designed to help students understand that all people have basic needs for food, clothing, and shelter; to show how the agricultural system helps meet these needs; to increase knowledge about nutrition and the basic food groups; and to improve the understanding of the concept of choice in the American agricultural system.

VOCABULARY

agriculture
alfalfa sprouts
available
bean sprouts
carbohydrates
chlorophyll
clothing
community
crops
cultivate
depend
digestion
food groups
grains
health
minerals
nutrition
product
protein
recommend
shelter
vegetables
vitamins
well-being

EVALUATION

Evaluation for this unit should include the following:

- Pretest
- Teacher observation and evaluation of student's classroom participation
- Checking of worksheets and other assigned tasks, reviewing with students, and recording of grades
- Post test

LESSON 1: Food, Clothing and Shelter — Our Basic Needs

PRINCIPLE: Many of our basic human needs for food, clothing, and shelter are provided by the agricultural system.

OBJECTIVES

The student will be able to

- identify objects (or pictures) as representing food, clothing, or shelter.
- identify objects (or pictures) as wants or needs related to food, clothing, or shelter.
- locate on maps where in Georgia key agricultural products are grown.

BACKGROUND NOTES

Food, clothing, and shelter are three of the basic needs of all peoples, wherever they are located in the world.* These items satisfy humankind's needs for sustenance or nourishment and for protection from the weather.

Products that fulfill the need for nourishment include fruits, vegetables, meats, dairy products, bread, and cereals; for clothing to provide protection from the weather and other outside forces — cotton, silk, and wool; and for shelter to protect from the elements — wood from timber, other plant fibers such as bamboo, and animal skins.

While many of the agricultural products we need are grown here, not all are. In our supermarkets, for example, we find kiwi fruit from New Zealand, papaya and coconuts from the Carribean Islands, butter from Ireland, and numbers of other imported foods. Efficient transportation makes possible the movement of these goods rapidly from one point to another and the satisfaction of wants and needs.

*For this lesson, we are not including our very basic needs for air and water.

MATERIALS AND AIDS

magazine pictures of items that would be either food, clothing, or shelter
Worksheet 2-1 and Supplement to 2-1
newsprint, paper, scissors, glue
Georgia's Major Products map for teacher's use
basic farm scene drawn on large paper
collection of various fruits and vegetables, some grown in your area, some not
collection of raw materials from which clothing and shelter are made

ACTIVITIES

- Have class select pictures, decide category (food, clothing, or shelter); and group the pictures to put on bulletin board or in a class book. Discuss whether the pictures that have been categorized are wants or needs. Individually, each child could be asked about an additional item to see if proper category placement is understood.

- Use Worksheet 2-1. Have students identify the main agricultural products of Georgia and areas of the state in which the products are grown. Then let them write or draw these products on the part of the state where each is grown. Discuss how agricultural products not grown in Georgia are obtained from other parts of the country or world; and point out that Georgia, in turn, sends some of its products to other places.

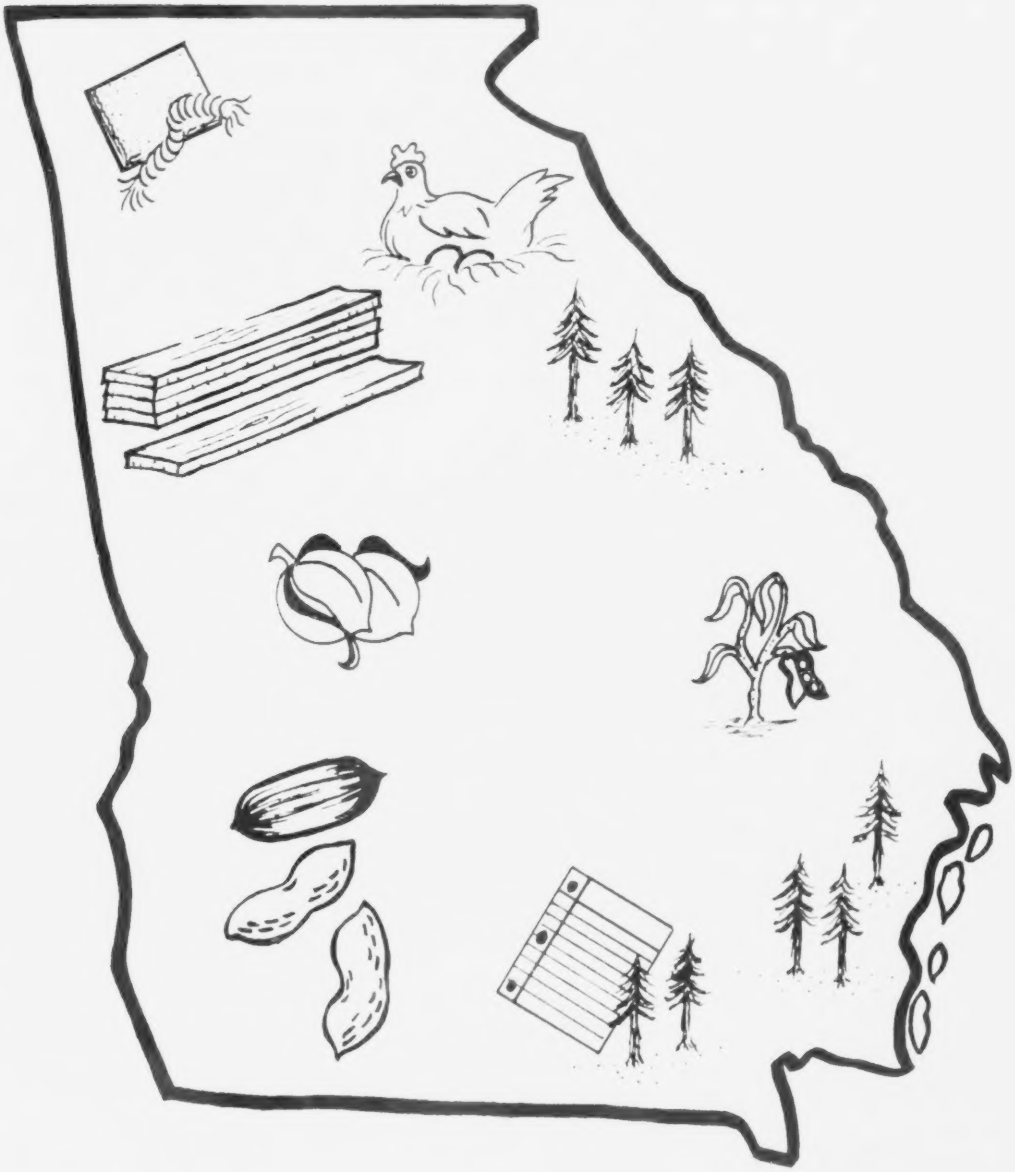
- Provide an assortment of objects (ex., a bowl of various fruits and a collection of fibers) which can be categorized into sources of food, clothing, or shelter. Have students discuss other objects which would fit into these three categories.

EXTENDED ACTIVITY

- Ask any students to bring pictures of items to add to a farm scene on the bulletin board. Using yarn and pins, attach the items around the edge of the scene, and identify where they are found on the farm.

Worksheet 2-1, Unit II, K-2, Lesson 1

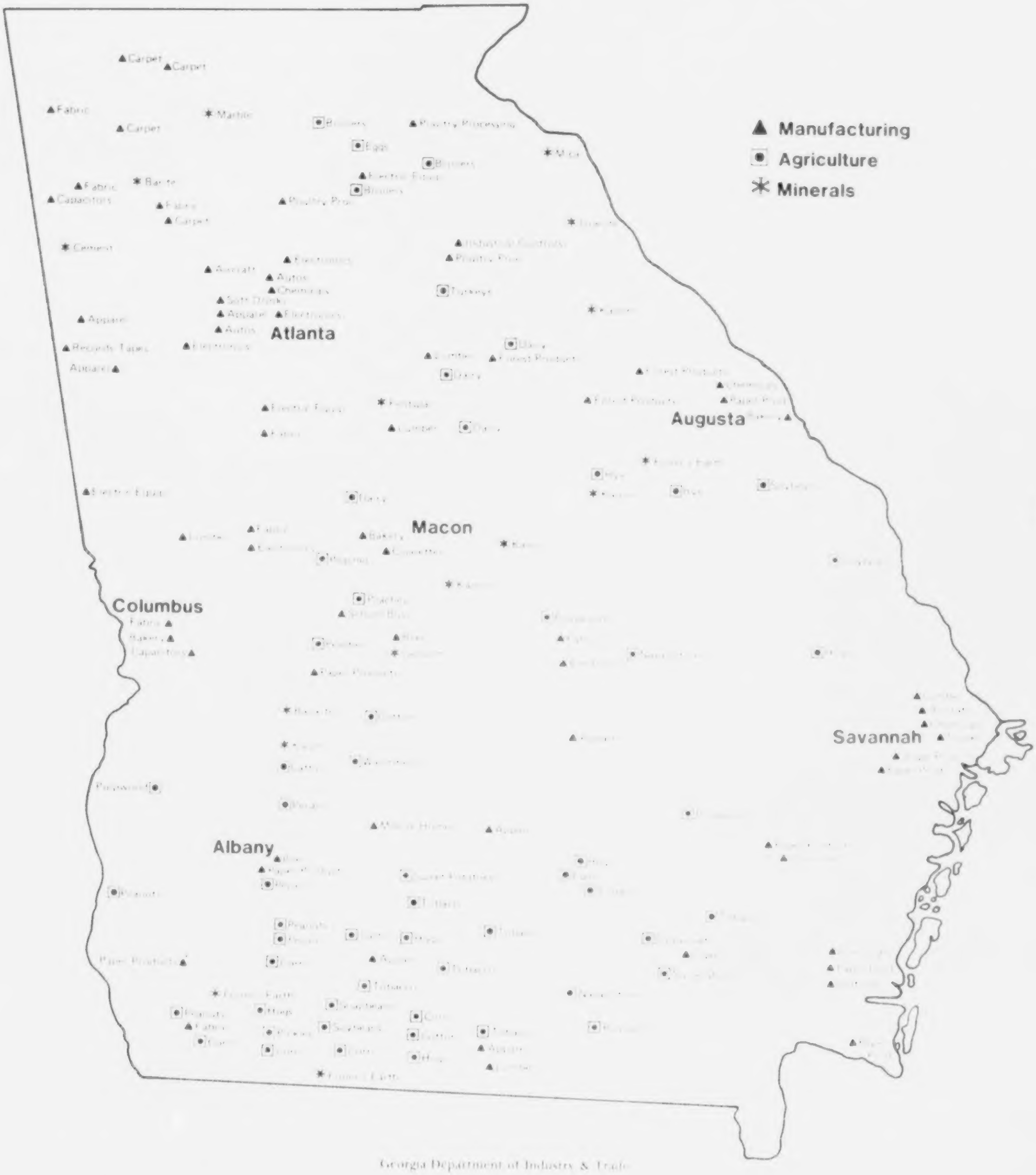
GEORGIA PRODUCTS



SOME MAJOR PRODUCTS
OF GEORGIA

Map for Teacher's Use, Unit I, K-2, Lesson 1

GEORGIA'S MAJOR PRODUCTS


▲ Manufacturing
● Agriculture
✳ Minerals
Carpet
Carpet
Fabric
Marble
Carpet
Broilers
Poultry Processing
Eggs
Broilers
Mica
Electric Equip.
Fabric
Barite
Broilers
Capacitors
Fabric
Poultry Proc.
Carpet
Cement
Industrial Controls
Poultry Proc.
Electronics
Aircraft
Autos
Chemicals
Turkeys
Soft Drinks
Apparel
Electronics
Apparel
Autos
Atlanta
Records Tapes
Electronics
Apparel
Dairy
Lumber
Forest Products
Dairy
Forest Products
Chemicals
Forest Products
Paper Prod.
Electric Equip.
Lumber
Dairy
Augusta
Fabric
Electric Equip.
Dairy
Macon
Bakery
Columbus
Fabric
Bakery
Capacitors
Peaches
School Buses
Paper Products
Savannah
Pulpwood
Albany
Peanuts
Paper Products
Peanuts
Tobacco
Soybeans
Peanuts
Hogs
Fabric
Soybeans
Cotton
Hogs
Fuller's Earth

Georgia Department of Industry & Trade
February 1983

LESSON 2: Choices Provided by the American Agricultural System

PRINCIPLE: The American agricultural system allows a variety of choices in meeting basic needs.

OBJECTIVES

The student will be able to

- list food crops grown in the United States.
- list products that are grown in the United States and are used to make clothing.
- list agricultural products used to provide shelter.

BACKGROUND NOTES

Different crops used for food, clothing, and shelter are grown in various regions of the United States; and through our good transportation systems, we, in Georgia can have things produced in other regions. From Florida, we may get fresh citrus fruits and strawberries. From the Midwest region of the U. S., we get grains from which we make flour and bread. From the South and Midwest, we get beef cattle. Georgia, on the other hand produces peanuts, pecans, peaches, poultry, and eggs which might be transported to other regions.

Cotton and wool are farm products used to make clothing and household items. About fourteen of our southern states grow cotton for use in our daily lives. From cattle, also, we get leather for shoes and other items of wearing apparel.

Farm products used for shelter include trees and other materials. In any southern city, a person would see concrete block, brick, and stone used in homes. Raw materials for all of these types of housing materials have come from the land or are grown on the land.

One's choice of basic needs depends on many things. It may involve individual taste, daily needs, or available income to purchase needs. For instance, families in the South may eat more okra and black-eyed peas. Families in the North may eat more corn or squash. People who do hard physical outdoor labor may need larger quantities of food. When one buys clothing, a dress made of synthetic fiber may cost less than a dress of silk or cotton and so the available income must be considered when a purchase is made. Whether one desires all wool clothing or a combination fiber depends on the available income to be spent.

MATERIALS AND AIDS

- kitchen garden or sieve (over plastic base)
- bean sprout and alfalfa shoot seeds (purchased at a health food store)
- source of water for washing and draining growing sprouts
- cover cloth to be moistened
- map showing Major Agricultural Products of the United States
- plain U. S. map

ACTIVITIES

- The teacher can use the development of a salad to teach this lesson. In the classroom, grow two vegetable ingredients that could be used in a salad. Wash and put only a very small amount (1-2 Tbs.) of bean sprout and alfalfa shoot seeds in a sieve or purchased kitchen garden container. For growing, the seeds need to be washed three to four times a day, kept drained but over water and covered with a damp cloth. When the sprouts are about an inch long (about the fourth day), they should be uncovered to become green and leafy in the daylight. While these are growing, explain the fruit-vegetable food group as the source of Vitamin A which fights infection, contributes to good eyesight, healthy teeth and bones, nice skin and strong blood vessels.

- Various types of salads make possible a variety of choices. However, for this activity, confine choices to tossed vegetables plus tomatoes for salads. Use newspaper ads to determine salad ingredients available in the local supermarkets. (Students need knowledge of money to accomplish this activity.) The students are divided into small groups. After group study of their newspaper ads, the students will choose salad ingredients to be purchased with a specified amount of money and then arrange their ad choices pictorially, showing each salad and its cost. Using the pictorial salad, discuss food groups, vitamins contained in the various salads, and how vitamin content might be improved. Students should determine which salad group got the most for its money and which got the most food value for its money.

- If field trips are a possibility, a supermarket trip could be the outgrowth of the salad ingredient activity. First, contact the supermarket manager for his approval of the trip!

ACTIVITIES (continued)

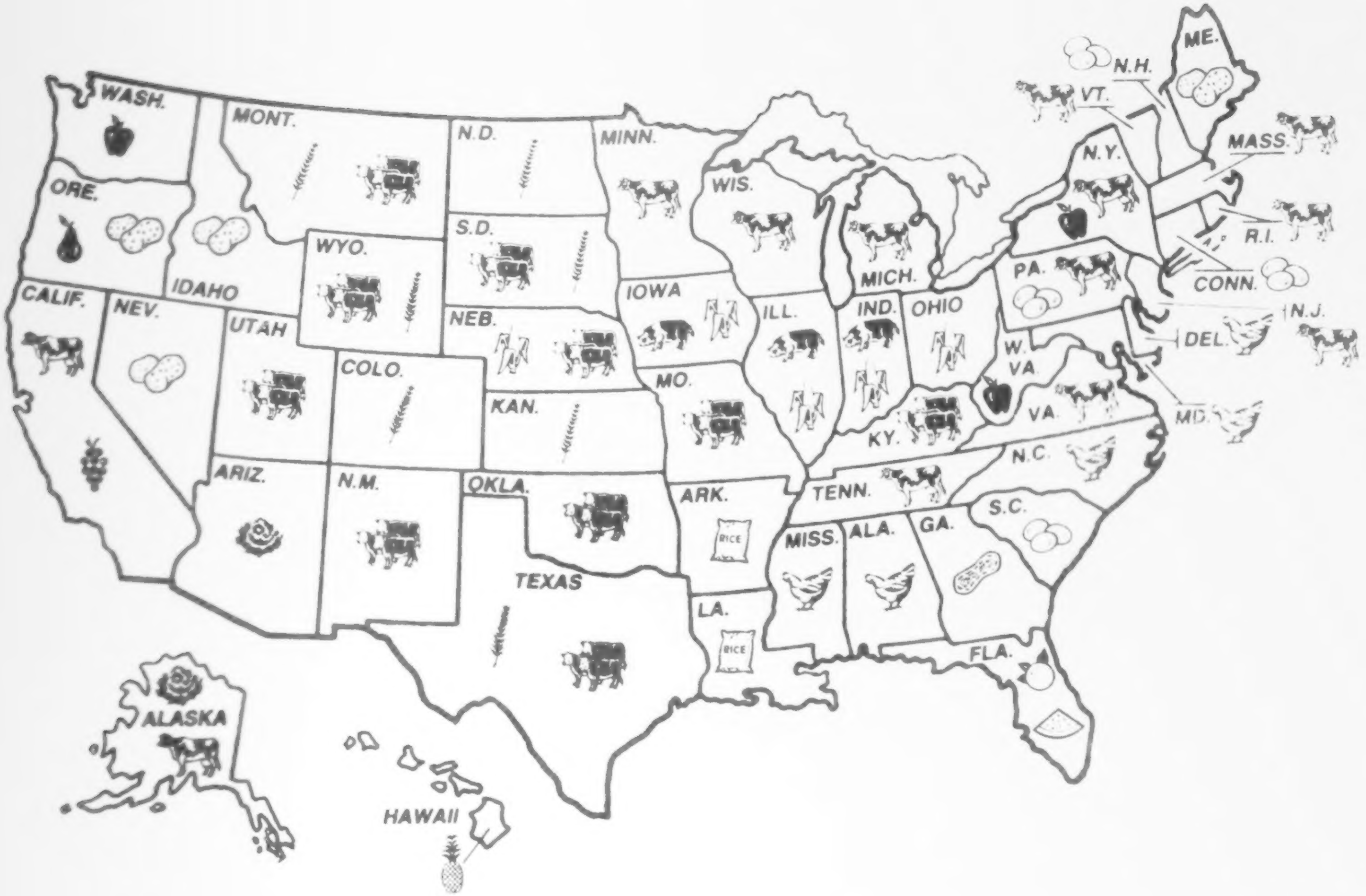
After trip plans and salad decisions are made, determine which group member should have charge of the shopping money (include tax amounts in calculations). Salad preparation will be done at school after shopping. You might use the help of mothers.

List on the board all salad ingredients used in salads and then identify how each ingredient was grown on the farm — above the ground or under the ground — and its method of cultivation. Discussion could center around pictures of farms, gardens, and vegetables. Complete pictures (magazine or drawn) showing growth of ingredients. Also discuss the relationship between the salad ingredients and the agricultural system.

- Look at some of the labels in the children's clothing. Read about fiber content and identify source on the farm.
- Collect pictures of houses (shelters) and identify source, if it is from agriculture (wood from trees, brick or concrete from soil, glass or mortar from sand).

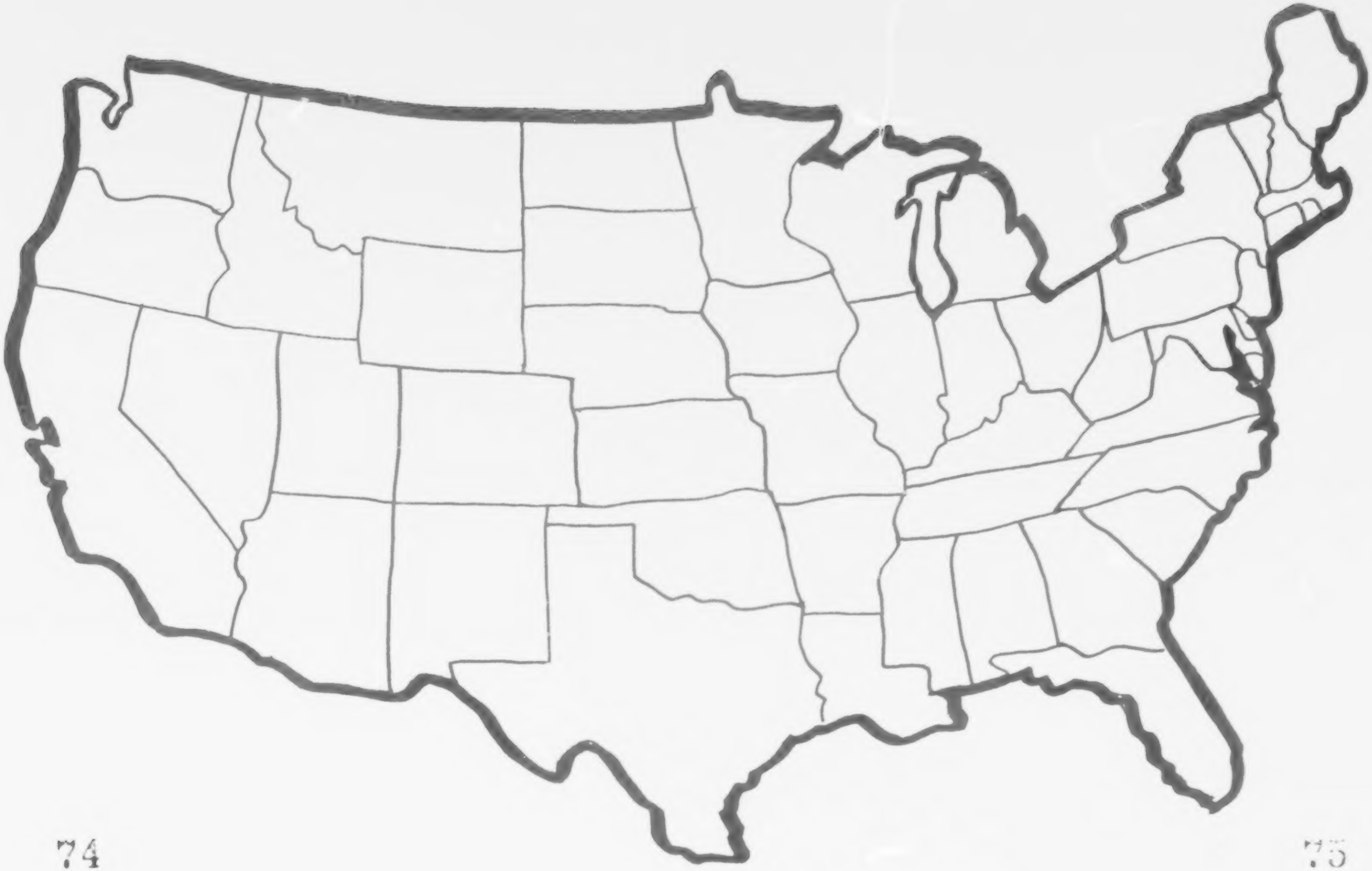
EXTENDED ACTIVITIES

- Game "Ag Tag" — The teacher starts with a word (agriculture) and each child adds a word (egg, goat, tractor) that begins with the ending letter of the last word.
- Play the game, "I'm a farmer and I'm going to raise —? (items to be used in a salad). This is an around-the-room game.
- Read the book, *Cheese, Peas, and Chocolate Pudding.*
- Game "Up and Down" — call out the names of salad ingredients and have children point up or down depending on whether the salad item grows above or under the ground.
- If the class took a field trip, have them write a letter to the supermarket manager thanking him for his help on their trip.


WASH.
MONT.
N.D.
MINN.
ORE.
IDAHO
WYO.
S.D.
WIS.
MICH.
N.H.
ME.
VT.
N.Y.
MASS.
R.I.
CONN.
N.J.
DEL.
MD.
PA.
CALIF.
NEV.
UTAH
COLO.
NEB.
IOWA
ILL.
IND.
OHIO
W. VA.
VA.
KAN.
MO.
KY.
N.C.
TENN.
S.C.
ARIZ.
N.M.
OKLA.
ARK.
RICE
MISS.
ALA.
GA.
TEXAS
LA.
RICE
FLA.
ALASKA
HAWAII

Some Major Agricultural Products of the United States
(From *The American Food Miracle*, Produced by McDonald's Restaurants)

Unit II, K-2, Lesson 2 (Teacher)



LESSON 3: Dependence on Product Availability

PRINCIPLE: Communities depend on the availability of agricultural products.

OBJECTIVES

The student will be able to

- name the locally grown agricultural products that affect the economy of the local community.
- identify persons in the local community who depend on agriculture for their livelihood.
- list the businesses in the local community directly related to agriculture.

BACKGROUND NOTES

In the early days of America, a colonial farmer produced enough food for himself and his family. He produced crops and products for food and clothing for his family (cotton, cattle, sheep) and used trees and wood products for shelter and furniture.

Now, farms have grown in size and farming methods have improved so that a farmer now produces enough for himself, fifty-two other Americans and twenty-six people of other countries.

Within any community, there will be people and businesses whose livelihood depends on the agricultural community. These people might include fertilizer dealers, implement sales, feed and seed stores, storage, grain elevators, banks making loans to farmers, and farmers' markets.

MATERIALS AND AIDS

pictures of farms of olden days
  and farms of today
paste and scissors
milk follow-up activity materials:
  white milk with crackers, cream and churn for buttermaking
  iron, bread, cheese, for sandwich making; ice cream ingredients plus salt, ice, and freezer

AGRICULTURE IN GEORGIA CLASSROOMS, Grades K-2
UNIT II, Lesson 3, Continued

MATERIALS (continued)

Worksheet 2-2 and Supplement
Worksheet 2-3
paper bags, scissors, paste, felt tips
Ms. Molly Milk (puppet for teacher)
peanut puzzles in envelopes (for group activities)
pattern for peanut puzzle
film, "The Peanut — Nuts and Views" (16 mm.)
newspaper food ads, scissors, paste, newsprint paper
bulletin board set: Trend "Foods for Good Health" with information sheet
salad containers for preparation and serving salads, forks
pictures of vegetables, fruits

ACTIVITIES

- After discussing with the class farms of early America and those of today, give the students Worksheet 2-2 and the Supplement to 2-2 to be completed. Students are to cut and arrange the pictures in the proper place.

- Use Porky Pig puppet (pattern Worksheet 2-3) to talk with the class about what he provides for all of us to use. After discussion about Porky Pig, let each student make his/her own paper bag puppet, using the pattern given. On the back of the bag, ask students to write a list in alphabetical order of at least ten products Porky provides. Every part of the pig is used except its squeal! (Teacher's list for the board: ham, bacon, pork chops, spare ribs, sausage, Canadian bacon, gloves, vests, belts, shoes, billfolds, coats, heart valves for humans, paint brush bristles, surgical sutures, lard, soap, shaving cream, insulin, gelatin used in ice cream, glue (ground bones), chewing gum (pepsin from pig stomachs), fertilizer (hog blood, pigs' feet and chitterlings). Footballs, although called pigskins, are made out of something else. In 1981 China raised the most hogs in the world.

- Ms. Molly Milk, the dairy cow, constantly keeps us healthy by providing us and all the community with agricultural products. Follow the discussion by any of these activities:
    preparing ice cream in the classroom
    having white milk and crackers
    letting the children prepare cheese sandwiches and pressing them with a hot iron to melt the cheese
    making butter from cream

- View the film, "The Peanut — Nuts and Views." The children in the film are in Randolph County, Georgia, and they tell the viewer about the peanuts. After the film, describe peanut growing and processing. Then divide the class into groups of four students and give them peanut puzzle envelopes (pattern at end of unit). Group work and cooperation are necessary for completion.

EXTENDED ACTIVITIES

- Song and game: Students choose a farm word that has each of the vowel sounds. Sing the song, "Old McDonald Had a Farm" a, e, i, o, u, and on that farm he had hay, a, e, i, o, u. With an a, a, here, and a, a, there, etc.

- Write and picture the story of George Washington Carver and his work with the peanut.

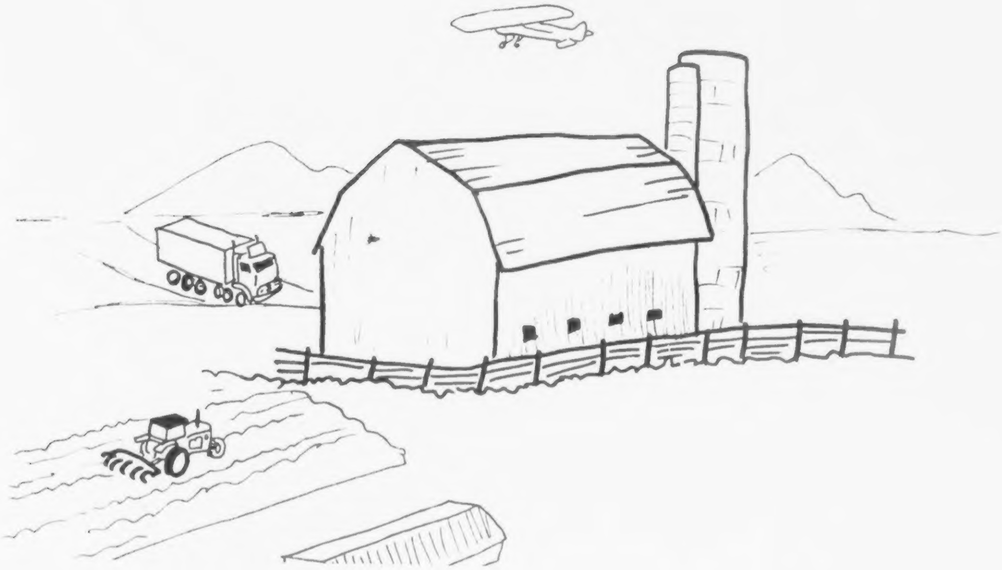
- Compare the products of the pig and the cow that are used in everyday life. Ask the children which provides more products for a longer period of time.

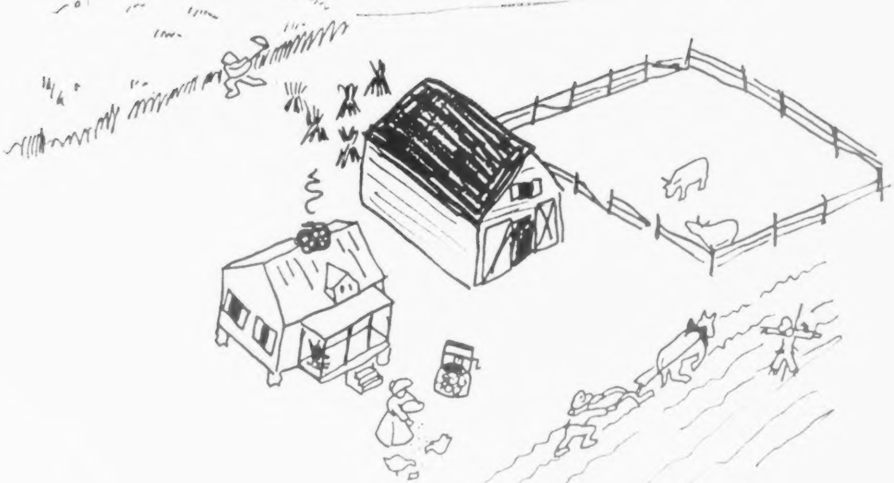
Worksheet, 2-2, Unit II, K-2, Lesson 3

OLDEN FARMS

FARMS OF TODAY

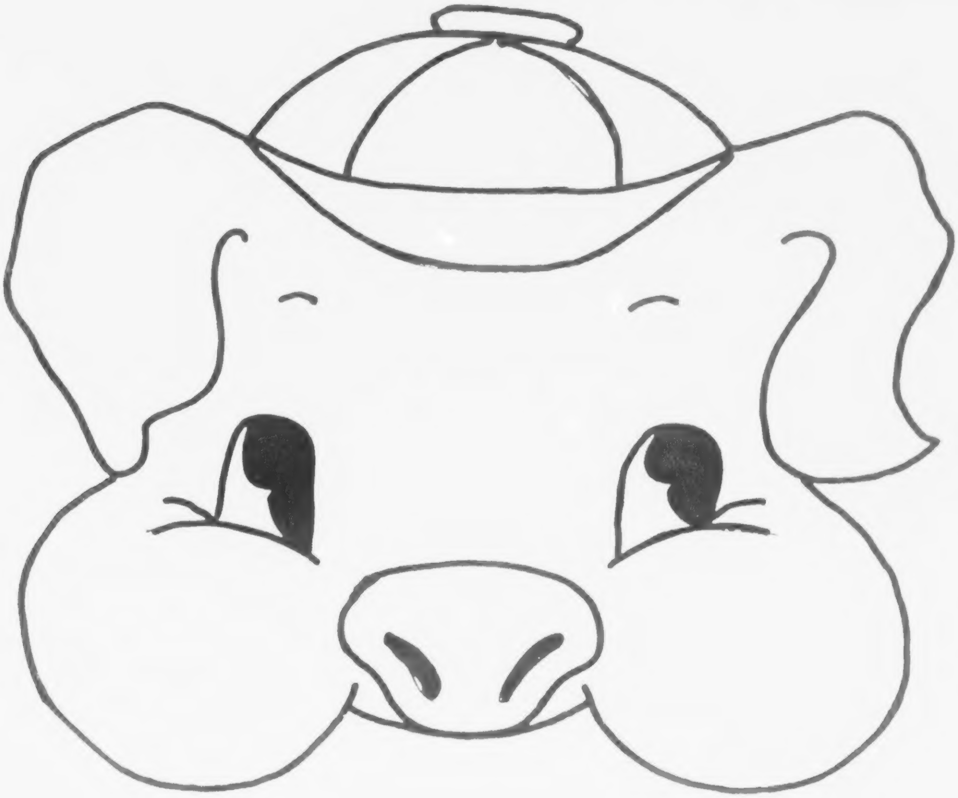
Worksheet 2-2 Supplement, Unit II, Lesson 3

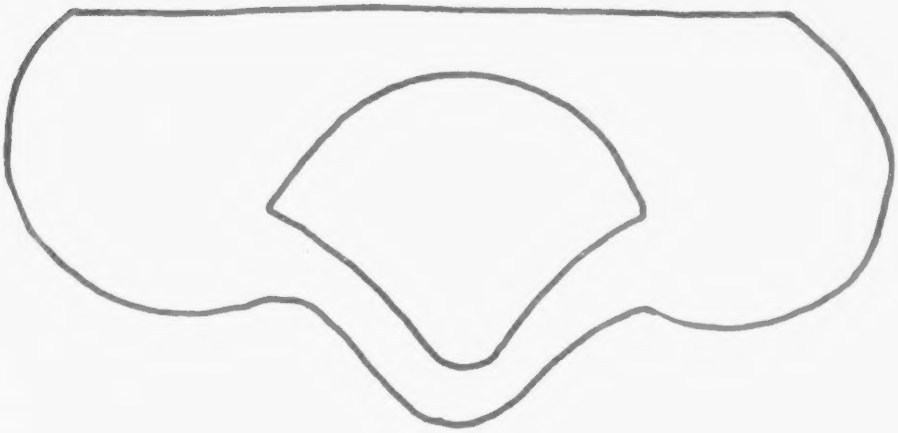




Worksheet 2-3, Unit II, K-2, Lesson 3

Porky Pig Puppet

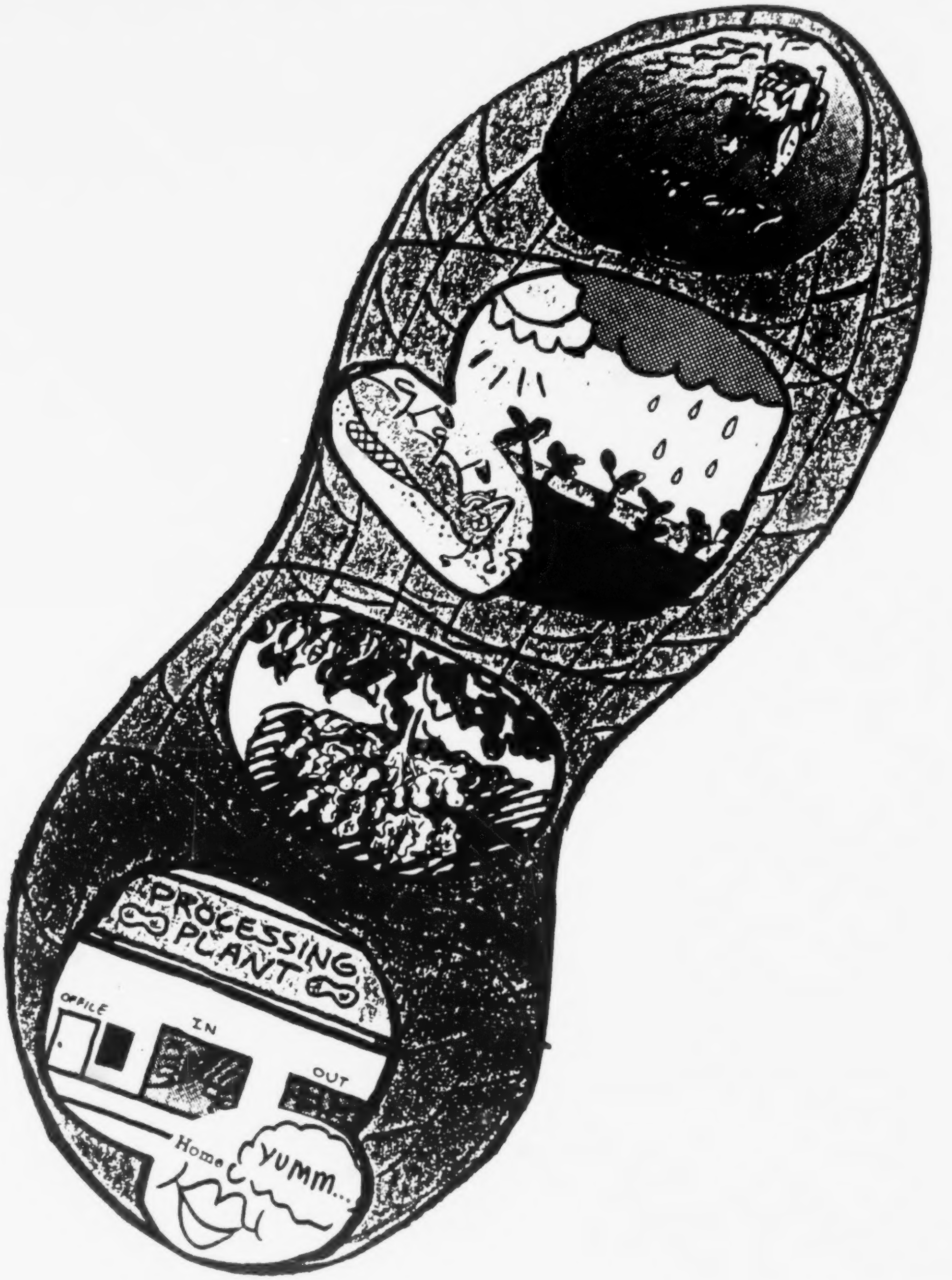




From *PAPER BAG PUPPETS* by DeAtna Williams 1966 by David S. Lake Publishers, Belmont, CA 94002

UNIT II, K-2, Lesson 3

Peanut Puzzle


PROCESSING PLANT
OFFICE
IN
OUT
Home
YUMM...

LESSON 4: Basic Food Groups

PRINCIPLE: Foods from the basic food groups are essential to good health.

OBJECTIVES

The student will be able to

- identify the basic food groups essential to good health.
- classify food products into the basic food groups.
- discuss the relationship of foods in the basic food groups to good health.

BACKGROUND NOTES

We all want to be healthy, to feel good, continue to grow, not be sick and miss school. To be healthy, we need food from each one of the food groups. Here is a list of the foods in each group and how many servings we need daily. (Teacher list attached.)

MATERIALS AND AIDS

Worksheets 2-4 through 2-5
Trend Co. bulletin board set
"Foods for Good Health," or
a similar teacher-made set

teacher aid sheet — Food Groups
items and pictures children bring
from home

ACTIVITIES

- Divide the bulletin board into four sections and attach food group set. Discuss the contents of the basic food groups. Use vitamin information and number of servings that are included with bulletin board set. Discuss the choices possible within each farm group. (Worksheet 2-4)
- Children will independently complete pictures of what they had for lunch, using the lunch tray activity master. Afterward, there will be discussion to determine from which food group each item came. (Worksheet 2-5)

ACTIVITIES (continued)

- Ask each student to bring a label or picture of something he/she had to eat. The next day locate it in the food chart and attach it to the bulletin board.
- Use completed activity masters and determine if the meal was balanced or not. If so, was the meal all eaten? Do the students have an understanding of the four basic food groups?

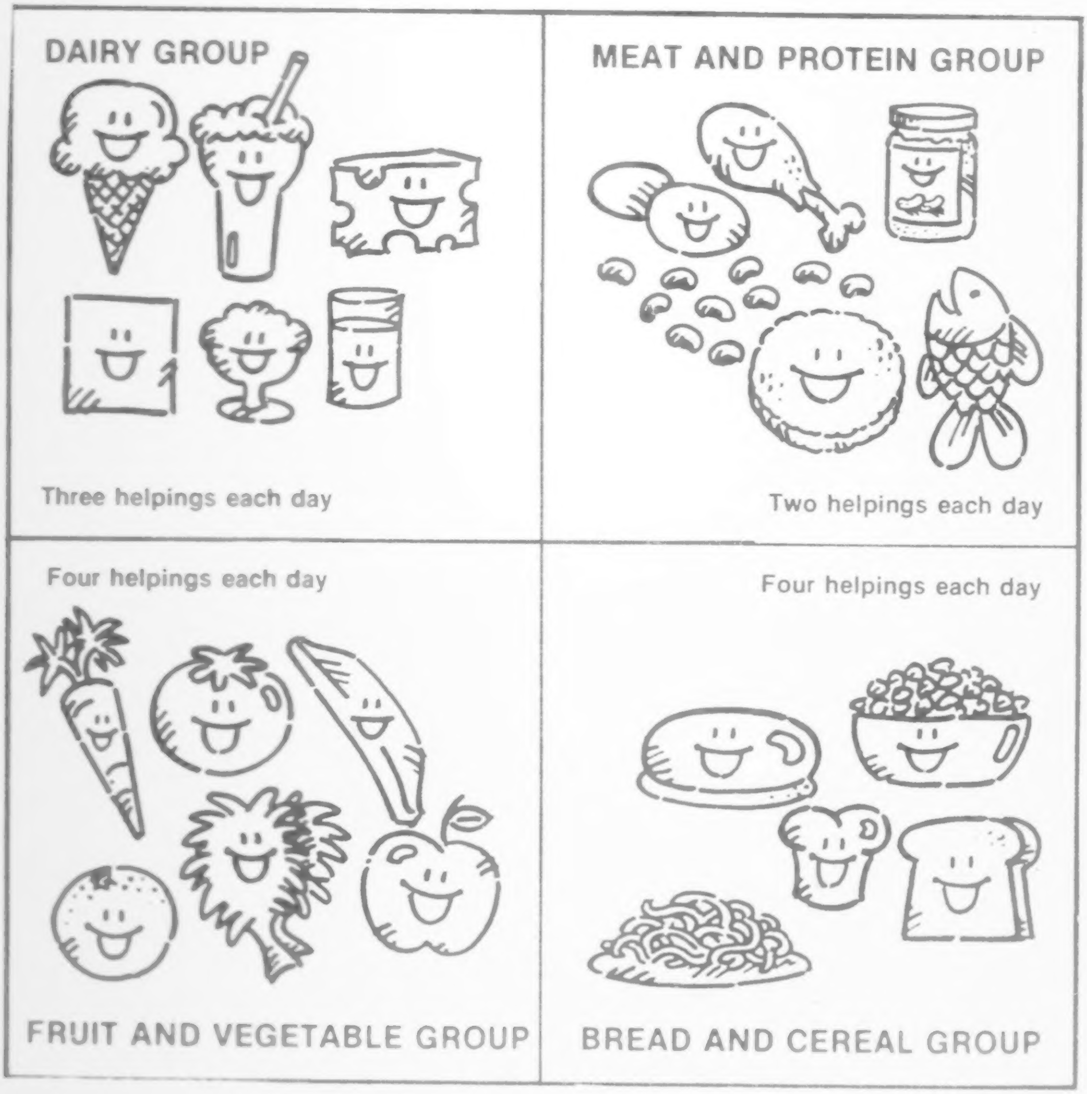
EXTENDED ACTIVITY

- Have students bring a variety of labels from food products in the home pantry. Sort these into the four food groups. Identify sources of each of the food groups represented by the labels.

Group	Daily Servings	Food (partial)	Use in Body
1. Meat	2	beef, pork, chicken, hamburger, hot dogs fish, eggs, chops, ribs. *Substitutes* — nuts, peanut butter, dried beans or beans, lentils, liver	Growth, strong muscles, rich red blood, pep, energy, (protein, iron) resistance to infection (Vit B)
2. Vegetable Fruit	4	carrots, broccoli greens, pumpkin, apricots, peas, cantaloupe, winter squash, yams, watermelon, orange, apple, bean sprouts, tomato, corn, cabbage	Healthy eyes and skin (Vit A) healthy bones, teeth, gums blood vessels strong and healthy (Vit. C) (potassium)
3. Grain (breads and cereal)	4	bread, rice, biscuit, cornbread, cereal, oatmeal, meal, noodles, macaroni, tortilla, spaghetti	Energy (carbohydrates), nerves (protein, Vit B, iron, niacin)
4. Dairy (milk)	Some daily 3-children 4-teens 2-adults	milk, milkshakes, cheese, pudding, custard, white sauce, cottage cheese, buttermilk, yogurt, ice cream	Strong bones, teeth normal, blood clotting, healthy nerves, good muscles (Vit D, calcium)

Worksheet 2-4, Unit II, K-2, Lesson 4

FOOD GROUP CHART

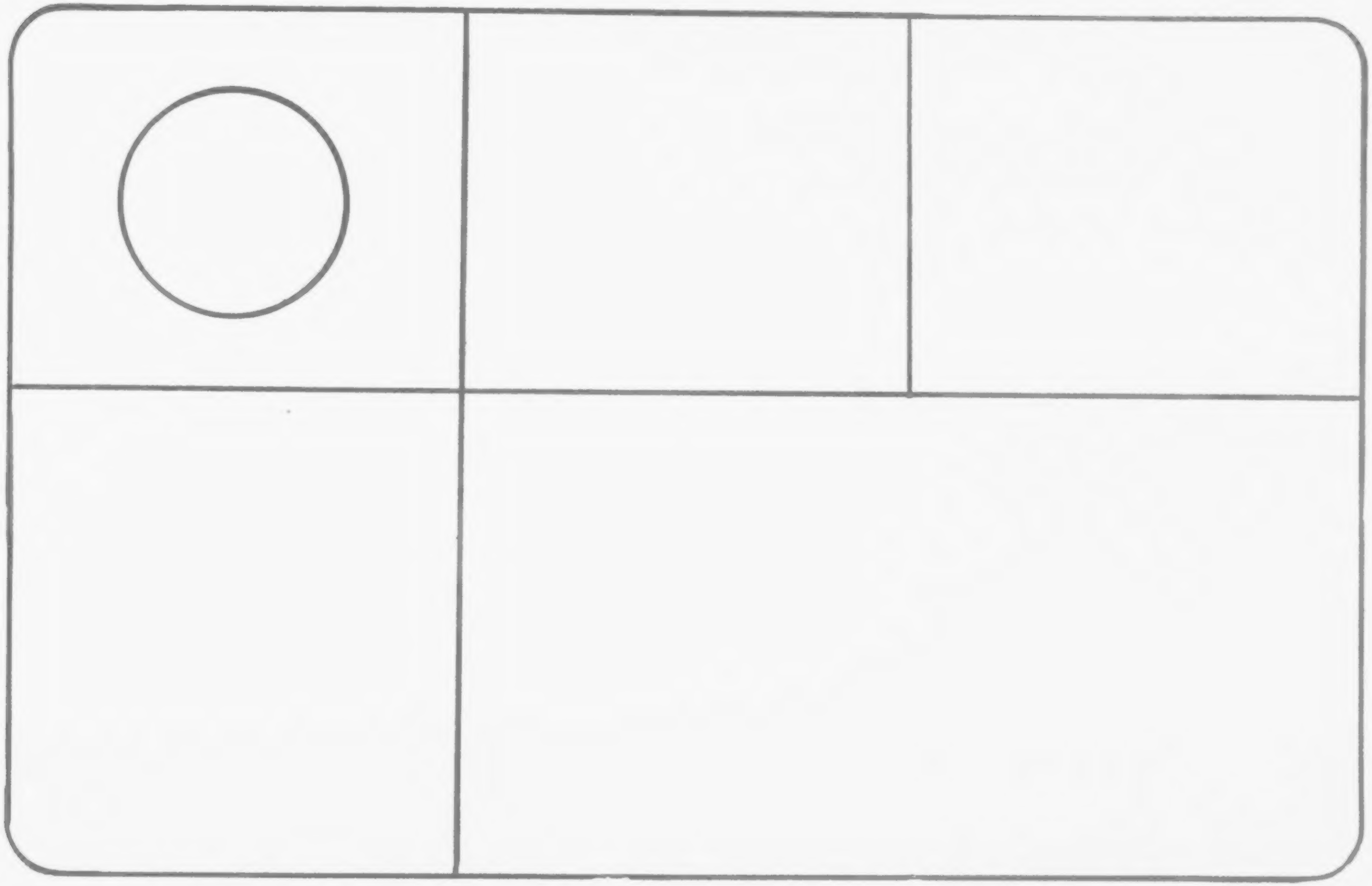

DAIRY GROUP
Three helpings each day
MEAT AND PROTEIN GROUP
Two helpings each day
Four helpings each day
FRUIT AND VEGETABLE GROUP
Four helpings each day
BREAD AND CEREAL GROUP

Excerpt from Activity Master 4, *Nutrition Action Pack*, McDonald's Corporation

NAME_______________________________

MY LUNCH

Worksheet 2-5, Unit II, K-2, Lesson 4



AGRICULTURE IN GEORGIA CLASSROOMS

Grades K-2

UNIT III: The Agricultural System Is Interdependent with the Environment

TIME: 2 Weeks (3 Lessons)

PURPOSE

The purpose of this unit is to help students understand that agricultural production is affected more by the forces of nature than are other major businesses. Students will understand that the growth of various products and commodities depends on the environment. They will understand that weather, climate, and geography greatly affect the agricultural system.

VOCABULARY

agriculture
climate
conservation
crops
erosion
farming
hydroponics
land
machines
reservoir
resources
soil
terrace
topsoil
wheat

EVALUATION

Evaluation for this unit should include the following:

- Pretest
- Teacher observation and evaluation of student's classroom participation
- Checking of worksheets and other assigned tasks, reviewing with students, and recording of grades
- Post test

LESSON 1: Effect of Climate on Farming

PRINCIPLE: Farming is affected by the climate.

OBJECTIVES

The student will be able to

- describe how the agricultural products grown within an area are related to the climate.
- describe the effects of weather on farming.

BACKGROUND NOTES

Climate generally determines what plants will grow in any part of the world. It also determines which type of agricultural product will be grown. Temperature, water, and light are the three most important factors in climate.

Several other things are a part of climate that affect plant growth. Rain, wind, hailstorms, tornadoes, humidity, pollution, and even salt spray on beaches affect the length of time needed for plants to grow to maturity and the size mature plants reach.

MATERIALS AND AIDS

magazines
several tree branches
paper-made trees (palm, maple, pine, cactus)
outdoor thermometer
weather chart for plotting
construction paper
material scraps
six cups

ACTIVITIES

- *This Climate Calls For . . .* (identifying climate) (Barth, page 56)

  Spread cut-out trees around room, labeling each tree with a different climate. Children cut out pictures of crops or animals that would be found in the different climates and hang on appropriate tree.

  Check pictures for appropriate placement.

ACTIVITIES (continued)

Palm

Maple

Pine

Cactus

- *Native Trees of Georgia*

    Using the following booklet, the students will identify two native trees of Georgia which are used for pulpwood which is a major commercial product in Georgia. The terrain and soil in Georgia are especially suitable for growing pine trees. Bishop, G. Norman. **Native Trees of Georgia.** Athens: University of Georgia, February, 1968. George Foster Peabody School of Forestry. (A free booklet which identifies the key characteristics, uses, and distribution of trees that are native to Georgia.

    (Loblolly Pine, Page 8, and Shortleaf Pine, Page 9.) Note the table of contents should be used for finding the pages.

- *Where Does It Grow?*

    Teacher holds up pictures of various crops or plants and asks where they might be growing. Do they grow in that place because of the climate? Why aren't oranges grown in Georgia? What crops could grow in Georgia's climate?

- *Seasons*

    Label four separate sections of the room for each season. Use a tree branch for a little tree in each section. Have children color leaves appropriately for each season and fasten to tree. Discuss how the climate affects the time of year that things grow. Observe class discussion of clothing and crops appropriate to each season.

- *Plants Face the Light*

    Place a potted bean plant in a cardboard box. Cut a small hole in the box to admit a limited amount of light. Watch the plant over several days turn its stem and leaves toward the light source.

EXTENDED ACTIVITIES

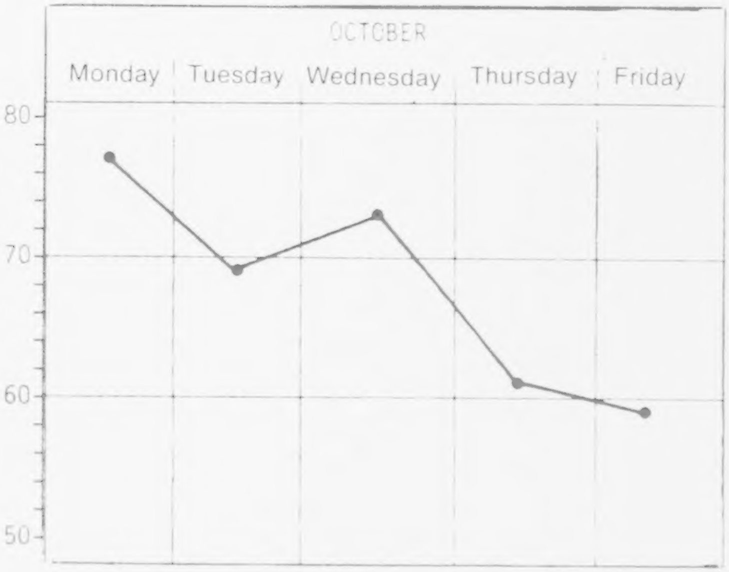
- *How Do Beans Grow?*

Plant bean seeds, one in each of six cups. Place one cup in sunlight, one in the dark; water one, but do not water another; place one in refrigerator and another near warm air. Discuss the difference that light, water, and heat make on the bean sprout.

Have students draw pictures to illustrate effect of light, water, and heat on the bean plants (How Do Beans Grow?)

- *Keeping The Weather* (Barth, p. 73)

Discuss seasonal activity in the garden. Keep a temperature chart for each month. Have children check temperature each day at a set time and record it on a chart. Once a week have two or three children illustrate what we should wear and what gardening activity could be done at each temperature.



AGRICULTURE IN GEORGIA CLASSROOMS, Grades K-2
UNIT III: The Agricultural System Is Interdependent with the Environment

LESSON 2: Types of Products Depend on Soil and Water

PRINCIPLE: The kinds of products farmers grow depend on soil and water.

OBJECTIVES

The student will be able to

- explain how the agricultural products grown in various areas are related to available soil and water resources.
- identify the types of soil found in the local area.
- identify the major water resources available in the local area.

BACKGROUND NOTES

The land is made up of soils that differ in many ways. The ideal soil for most crops is nearly level and easy to work. It takes in and holds water without staying wet. It contains plant nutrients and holds them.

Some places in Georgia have rich, fertile soil. Some parts, especially in the Coastal Plains, though, are too sandy to grow food crops.

Vegetation differs from one soil type to another. Cactus grows well in hot, dry, desert sand, for example, but cannot live in cold, mountainous climates. Pine trees dot the hills of lands with rich soil and plenty of rain.

MATERIALS AND AIDS

Worksheet 3-1
family-type magazines
sweet potatoes
pictures related to the lesson
pots, soil types, soybeans

ACTIVITIES

- *Soil holds water for plants.* Teacher fills two cans with holes perforated in the bottom, one with sand and the other with local topsoil. As pupils watch, water is poured into cans. The sandy soil does not retain the water. What type of crops or plants could grown in such land?

ACTIVITIES (continued

- *Land, crops, and people.* Show pictures of various terrains and people living in different climates. Ask what people are associated with desert living, tropical living, forest land living, etc., and what types of plants are growing in what soil and water conditions. Does the soil determine what kind of people live there?

- *Local area soil and plants.* Have students place a handful of soil from their homes or the school yard in a sandwich bag and bring to class. Have students try to identify each soil type — sand, topsoil — and tell what plants they saw growing in each type of soil. Ask what other plants or crops students have seen growing in the local area. Are there any farms nearby? What are they growing there?

- *Local area water.* Ask students where their water comes from — a well, a river, the city reservoir? Does it rain often, and does water collect in local rivers or lakes? Is this water helpful in growing local plants and crops? Discuss. Examine a map of Georgia and identify the major rivers. Use Worksheet 3-1.

- *Growing a soybean plant in different soil types.* Divide students into groups. Give each group three pots and three different types of soil. Have each group plant several soybeans in each type of soil. Each group places its pots in a sunny window and keeps a daily log, recording the plants' growth. They may also draw pictures to place in the log. Which soil seems to produce the most growth?

EXTENDED ACTIVITIES

- *Synthetic soil.* Soil substitutes, or synthetic soil, can be obtained from seed dealers and garden supply centers. These are a mixture of horticultural vermiculite, peat moss, and fertilizer. Have each group of students fill a pot with synthetic soil and plant several soybeans. Now keep a log and compare the growth in the best soil observed in the previous activity.

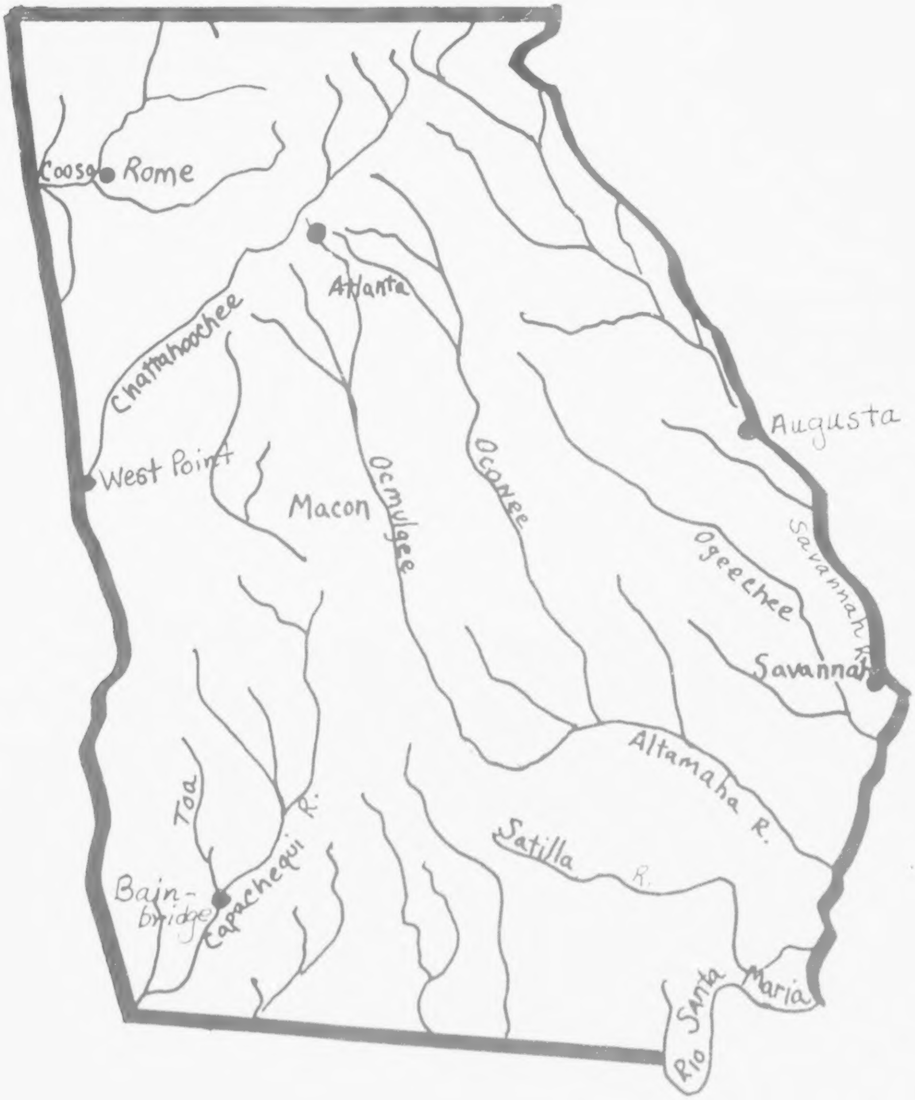
- *Hydroponic gardening.* Obtain a glass jar and fill with water. Stick toothpicks around the side of a sweet potato in the jar opening, half immersed in water. Have students observe the plant growing without soil. Discuss the possibility of using hydroponic means — water and fertilizer — to grow plants in areas with poor soil.

- *Make polaroid pictures* of the seeds growing in different natural soil types and in synthetic soil. Arrange a bulletin board display.

Worksheet 3-1, Unit III, K-2, Lesson 2

Water is a very important resource. Some of us get water from rivers.

On the map of Georgia can you find a river or stream near or in the area where you live?


Coosa
Rome
Atlanta
Chattahoochee
West Point
Macon
Ocmulgee
Oconee
Augusta
Savannah R.
Ogeechee
Savannah
Altamaha R.
Satilla R.
Toa
Capachequi R.
Bain-bridge
Santa Maria
Rio Santa

AGRICULTURE IN GEORGIA CLASSROOMS, Grades K-2
UNIT III: The Agricultural System Is Interdependent with the Environment

LESSON 3: Conservation of Soil and Water

PRINCIPLE: Farmers must protect soil and water.

OBJECTIVES

Students will be able to

- explain how farmers can protect the water and soil resources.
- explain why communities have rules governing soil and water resources.

BACKGROUND NOTES

Since water and soil are needed to grow crops, farmers should protect these natural resources. Water can wash away topsoil from slopes (erosion), and constant growing of the same crop on the same field can deplete soil fertility. Preserving soil and its fertility is called conservation.

Communities encourage farming practices and water use that will conserve soil resources for future use.

MATERIALS AND AIDS

Worksheet 3-2

learning center as described in activity

ACTIVITIES

- *Prepare a learning center with a picture of a lake.* Task is to pollute the lake in the way children have seen our water and countryside marred by careless people (candy and chewing gum wrappers, paper bags, bits of food, beer and soft drink cans and bottles, fast-food cartons, drinking straws, household garbage, and such). Follow up with questions such as these:

  Before the lake was polluted, how could the water be used?

  After the lake is polluted, how could the water be used?

  What kinds of costs will be required to return the lake to its original clean state so that it can be used again to benefit society?

ACTIVITIES (continued)

- Use Worksheet 3-2. Discuss what *natural soil resources* are and explain that topsoil is needed to grow crops. Topsoil is lost through erosion and overgrowing, i. e., raising several crops a year on the same soil without fertilizing. Point out that soil may be conserved by contour plowing and crop rotation.

  Erosion damages farm soil. Read the following selection to students. Ask them to identify the terms *erosion, topsoil, terraces, plow.*

  READ TO LEARN: Protecting the Soil

  The topsoil of our land furnishes most of the nourishment plants need. When the topsoil is damaged by erosion, the farmer cannot grow good crops.

  Erosion is the slow washing away of the soil by the wind and rain after the land is cleared, and not enough growth is left to hold the soil in place.

  The early settlers cut down trees and plowed their fields to loosen the soil. Many farmers plowed with the rows running up and down hills. There was plenty of land in the early days; and when one field became eroded, the farmer just moved to another one.

  Farm experts soon learned ways to protect the soil and stop erosion. They build terraces which stop the soil from washing away on hillsides. Terraces are wide, flat strips of land cut on a hill on which crops are planted. Experts have learned better ways to plow and to plant crops such as clover and cowpeas, which build up the soil.

  Ask students to describe what would happen if we had no water.

  Would we have to move to new land if all our soil eroded away? Is there new land available to which a farmer might move?

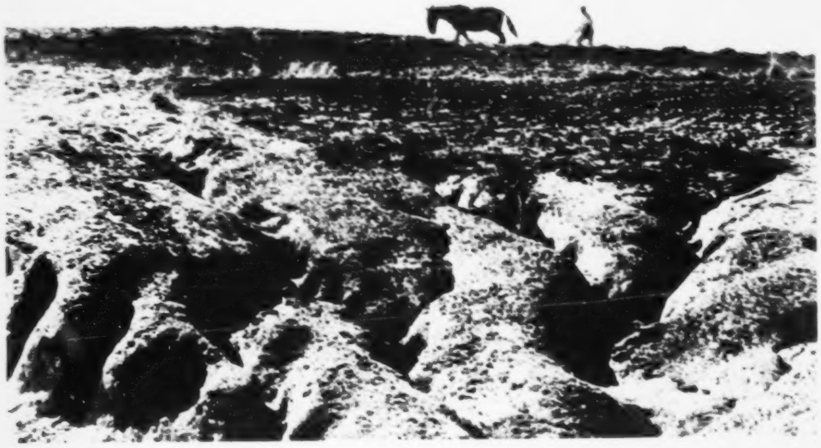
Worksheet 3-2, UNIT III, Grades K-2, Lesson 3

This is a picture of a field that has been eroded.

Is the land in the picture different from the land in the countryside near you?

What might have caused the land in this picture to be this way?

Would the land grow crops?



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AGRICULTURE IN GEORGIA CLASSROOMS

Grades K-2

UNIT IV. The Agricultural System Requires Continual Access to Natural Resources

TIME: 1 Week (2 Lessons)

PURPOSE

The purpose of this unit is to help students understand what natural resources are, how producers use the resources, which resources can and which cannot be replaced. Natural resources provide the raw materials needed to produce goods and services. The natural resources in an area help to determine what products can be produced. It is, therefore, essential that students understand the importance of conservation and perceive the need to protect and manage our natural resources carefully for future generations.

VOCABULARY

cattle
cattle breeds
choice
circular flow
climate
consumer
dairy
feedlot
forage
grasses
investment
opportunity cost
orchard
predict
production
protect
range
replanting
research
ruminant
savings
scarity

EVALUATION

Evaluation for this unit should include the following:

- Pretest
- Teacher observation and evaluation of student's classroom participation
- Checking of worksheets and other assigned tasks, reviewing with students, and recording of grades
- Post test

LESSON 1: Agricultural Production and Natural Resources

PRINCIPLE: Agricultural production is dependent on natural resources.

OBJECTIVES

The student will be able to

- define natural resources.
- identify the natural resources important to farmers.
- describe the resources in the local area available to local farmers.

BACKGROUND NOTES

Nature provides us with many good things — minerals, soil, trees, animals, sun, water (rain, lakes, streams, rivers, oceans). The bodies of water contain many forms of life used for food and other needs. Many of the things found in nature are useful in producing or growing other things. These things from nature, called *natural resources*, are used to satisfy people's wants and needs.

Soil and water are two natural resources needed for all types of agricultural production. With few exceptions, both are needed. You have studied about hydroponics, which uses only water and nutrients to grow plants. Seeds are usually placed into the soil to germinate and grow into crops. Water and sunshine, or light energy, along with minerals from the soil, initiate and prompt plant growth.

Animals, a product of the farm, need forage crops for food. These crops grow in the soil, which uses the water and light to facilitate growth, as it does for food crops grown to feed people. Animals also need water for growth and maintenance of a health system appropriate for food.

Farmers sometimes use water as an energy source, for example, to turn a millstone that grinds grain; or farmers may use wind, a natural resource, as an energy source to turn the windmill that pumps water into a tank. Farm workers also use heated water, along with detergents, to clean equipment such as milking machines in a dairy farm.

BACKGROUND NOTES (continued)

While water may be heated by electricity, it is often heated with wood (another natural resource coming from the land) as the fuel. Some brick makers in China use scraps of wood, stalks, and reeds to fire the bricks in the kilns.

The list of illustrations is endless. Locate additional ones as necessary to enable the children themselves to justify the statement that natural resources are vital to agricultural production. Give examples from the geographical area in which you teach.

MATERIALS AND AIDS

Worksheet 4-1
felt board with felt figures of farmer, trees, other farm items or resources
Worksheet 4-2, Patterns
symbols of raindrops, lightning, hail, wind, snowflakes, snow, seeds, etc.
small brown paper bags, one for each child
pitcher, lemons, juicer, sugar, stirring device, measuring cup
paper cups for making and serving lemonade
sheet with pictures of six objects, three of which are natural resources

ACTIVITIES

- Make on the chalkboard a list of goods or services produced in your locale, or tack pictures of these goods and services on the bulletin board. Have children name the natural resources used to produce those goods. Are all these resources readily available in your area, or must some be transported to your area? (ex. apples, peanuts, poultry, eggs, lumber, paper bags)
- Talk with the class about the earlier visit from the extension agent and his discussion of the soil types in your area. Use this discussion as an opportunity to create understanding that resources in the same classification may vary in quality and value.
- Read "The Forester" poem (Georgia State University, *Egg-Bert*, p. 16) to the students:

ACTIVITIES (continued)

I can't decide what to do with these trees
So many things are made from these.
These help make houses, furniture, toys.
We hit drums hard with sticks for noise.
Trees help us in school, pencils, paper, and books.
Things made of trees are found wherever one looks.
It takes time to grow trees, sometimes many years.
We must make wise use of our trees, I fear.
You might want to think of their many uses.
I must admit, I make no excuses,
That I'm confused as to what I'd choose
As to how to decide how many trees should be used.

Ask the students questions such as these:

What problem does the poet discuss?

What are the various uses of trees suggested in the poem?

- Present the felt board (patterns at end of lesson) in the following manner. It demonstrates a simplified circular flow of resources, goods, and services. (Worksheet 4-1)

Here are pictures of things that might be made from your trees. You are the forester farmer, or tree farmer; and you need to use your trees wisely. Choose one picture which shows what you will do with your tree. How many of your trees will you use?

Here is the farmer (on felt board). He decides to sell two of his trees to the paper pulp mill. Discuss what the mill does then. Attach the money he receives, which he uses to buy food and clothes. The farmer might then sell another tree which he uses to buy food and also seeds for new trees (investment). Some trees he will save. They will grow larger and will be worth more when he does sell them. With some of his money after another sale, the farmer decides to buy more land so that he can plant more trees (investment).

Another time, the farmer decides to use some of his money to invest in a research company. This company is trying to develop new, stronger, faster-growing trees; and the farmer sees that this investment could be a big help to him. He could raise his trees faster and make money sooner. Let the children make their own flow chart.

ACTIVITIES (continued)

- The same idea could be applied to apple trees. The farmer might be interested in types of trees that grow larger apples, in a research project developing a spray to keep the apples from becoming diseased.

  Have the students bring to class pictures of various types of farms (ranch, grain, dairy, orchard, tree, nuts, cotton, etc.). Ask students to tell or write a story about one of the pictures.

- Have students make symbols of raindrops, lightning, hail, wind, snowflakes, sun, or ice (pattern for felt pieces attached). Apply symbols to the flow chart.

  Go through the symbols and determine what might happen to various farms with excess amounts of the resource represented by the symbols. Look at both good and bad results. Follow this discussion with ways the farmer might help protect the soil or land, water, and forests (irrigation, crop rotation, ponds for water storage, replanting, fertilizing, spraying, watching weather forecasts for warnings).

  Display the map of Georgia showing its rivers, lakes, and coastline.

EXTENDED ACTIVITIES

- From among pictures of about six objects, have students select those that represent natural resources. Examples are seeds, beads, car, fruit, hoe, a grassy knoll or a stream. Duplicate these pictures on a sheet and provide a space for checking the natural resources. Children should be correct in all selections.

- Ask the children which of the resources selected in the first activity require the use of other resources before the selected ones can be used by people. Answer: The seeds, the grass, and the stream.

- Ask the children to draw a picture of at least one thing each of the natural resources can produce when used in conjunction with another resource and/or resources. (Possible answers: Seeds — vegetables; fruit — pie; grass — hay; stream — power or filtered water for drinking, i. e., human use. NOTE the fruit could be eaten fresh after shipment to market.)

- Take a nature walk through the woods or park. Give each child a small paper bag in which to gather samples of natural resources available in your school area. This is a good time to point out the things around us nature provides. In the bags collect leaves, sticks, nuts, wild flowers, wood, etc., that can be used to make a nature picture. Occasionally pick up a man-made item such as a bottle cap or paper cup and ask, "Is this something from nature?" "Did it grow on a tree or come from the soil?" Children will quickly see that people had to make these items.

  Back in the classroom, help the childen make a nature picture, a collage or perhaps picture of trees or a bird fashioned of the leaves.

  Discuss how through their own labor and creativity they have transformed resources into a piece of art work (*Elementary Economist*, Vol. 6, No. 1, p. 4).

EXTENDED ACTIVITIES (continued)

- Tell the children the story of the three little pigs who lived on a farm. The story is essentially the same as the familiar story, with the addition that the pigs lived on the farm. After the story, ask the children what resource each pig used to build his house. Which was man-made? If the pig were a real person, what would you call the work he did? (human resource — labor)

- To show how, through a process, we change things from a less desirable to a more desirable state, let the children make lemonade in a production line. Explain that they are changing the location of the lemon juice from the inside to the outside of the rind, adding water, cooling, and sweetening it. The resources are gifts of nature (lemons, sugar, and water), human energy or labor, capital goods (knife, stirring device, and pitcher), and the imagination to see that lemonade is preferable to lemons *(Elementary Economist*, Vol. 6, No. 1, p. 4).

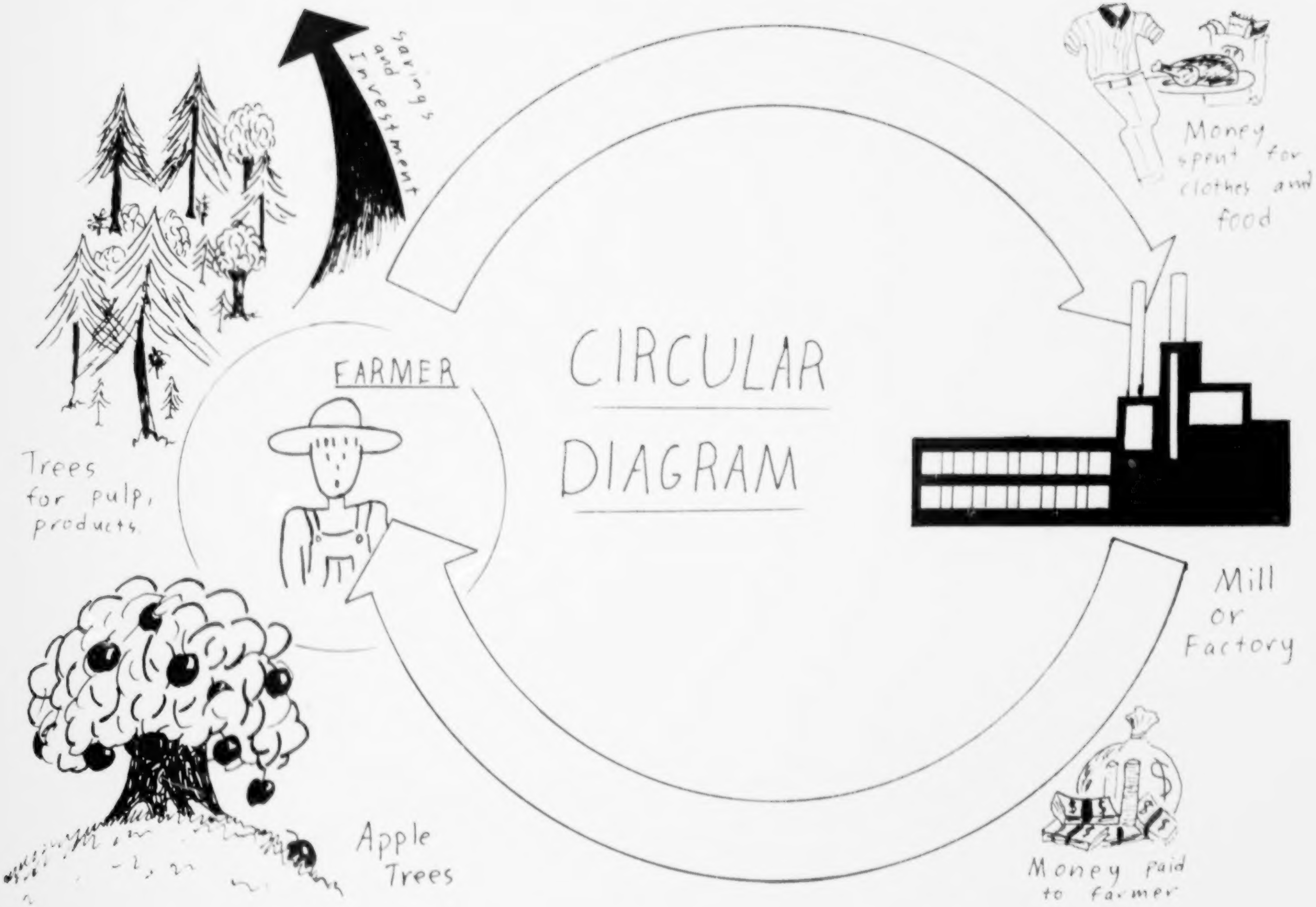
  Explain that this process is called *production* when the new state is preferred to the old.

  Let the children drink the lemonade, and explain that, as users of the lemonade, they are called *consumers*.

- View the film, "Captain Kangaroo and the Cow," and talk about the food the cow provides.

- View the film, "The Peanut — Nuts and Views." Make a collage using peanut product pictures.

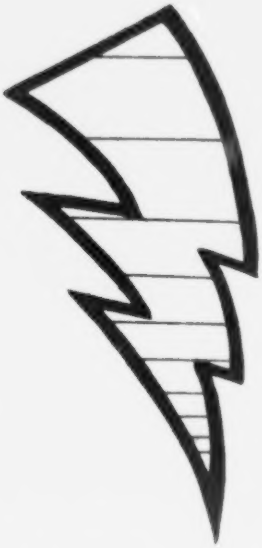
Worksheet 4-1, Unit IV, K-2, Lesson 1


savings and Investment
Money spent for clothes and food
CIRCULAR DIAGRAM
FARMER
Trees for pulp, products
Mill or Factory
Apple Trees
Money paid to farmer

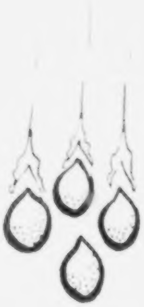
Worksheet 4-2, Unit IV, K-2, Lesson 1

These pictures represent various characteristics of weather.

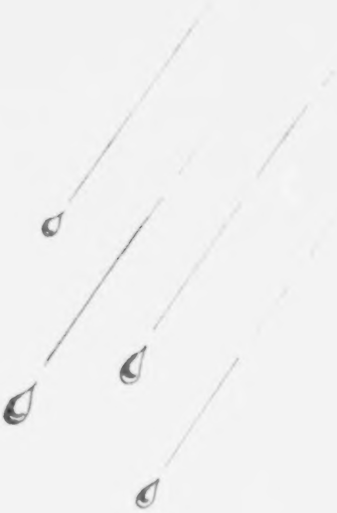
Make your own symbols to put on your flow chart.



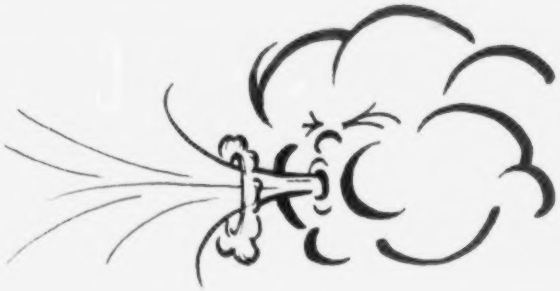
Lightning



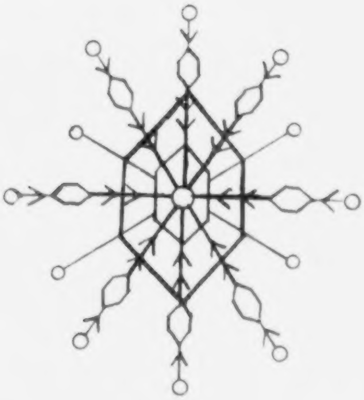
Hail



Rain



Wind



Snow

LESSON 2: Conservation Protects Natural Resources

PRINCIPLE: Conservation is important to protect resources essential to agricultural production.

OBJECTIVES

The student will be able to

- identify natural resources that cannot be replaced.
- identify natural resources that can be recycled.
- describe how the farmer can protect the natural resources which are essential to farming.

BACKGROUND NOTES

Conservation is the wise management and preservation of natural resources. If we do not conserve our natural resources, some may be misused or used up (exhausted). Caring for and protecting plants and animals about the home and in the community, keeping our water supply (lakes, streams, rivers) clean of trash and other waste, and protecting our forests from fires which endanger homes and community are important values to establish during elementary school years.

Conservation of our resources ties in with responsible citizenship. This citizenship encompasses, among other things, our manners in the woods as well as in the community, prevention of forest fires, and protection of our forests from insects and disease.

The tree protects the soil, holds moisture, and prevents soil erosion. All the trees together in an orchard or forest protect one another from destruction by the forces of nature. Trees provide shade, help cool and clean our atmosphere. Trees, shrubs, and other plants also improve the beauty or aesthetics of our surroundings when we care for them properly.

Natural resources can be divided into three basic groups: (1) exhaustible resources, such as fossil fuels, building stones, and most minerals; (2) renewable resources, such as animals, plants, and soils; and (3) inexhaustible resources, such as nuclear and

BACKGROUND NOTES (continued)

solar energy, water, and air. It is, for example, impossible to replace coal once it has been taken from the earth. On the chicken farm, while most of the hens may lay eggs for sale, some are kept just for breeding. By providing for the hatching of new chicks, the farmer maintains the supply of hens needed for laying eggs. Plants take in carbon dioxide and give off the oxygen people breathe, and these help to maintain the supply of fresh air.

The way people use their natural resources varies with their changing wants and needs.

The farmer can protect the natural resources essential to farming in various ways, such as rotating the crops he plants on the same plot of soil to prevent using up all of certain minerals; giving the soil a chance to rest from growing crops; refertilizing; laying out rows in such a way as to avoid erosion by the rain (ex., around the hill rather than up and down); planting trees and ground covers; keeping lakes and streams free of wastes hazardous to the animals that must drink from that water.

MATERIALS AND AIDS

book *Stone Soup*
learning center built around
  Stone Soup
  (drawings and instructions
  following lesson)

book *New True Book:*
  Conservation

ACTIVITIES

- To develop the idea that great demand for a resource, or failure to protect it, may cause a scarcity or shortage situation, read the book *Stone Soup* by Marcia Brown. The people in this story had a scarcity situation: They did not have enough food to eat. Have the children brainstorm why certain resources are scarce and what producers can do about the scarcity of certain resources (*substitute* another resource: coal or wood for oil, polyester fabric for cotton; or *create* a new product, such as brick for lumber in building). (Suzanne Wegner, p. 7, *Elementary Economist*, Vol. 6, No. 1).

ACTIVITIES (continued)

- To extend the concept of scarcity into natural resources, read the book *New True Book: Conservation* by Richard Gates. This book details the many riches of the land, how we protect land and animals, why animals disappear, and what we can do about it (Suzanne Wegner, p. 7). Talk about each of these facets of the book.
- Sing the song "This Land Is Your Land" by Woodie Guthrie. Discuss the many natural resources detailed in the song: forest, Gulf Stream, valleys, and desert (Suzanne Wegner, p. 7).
- Have the children write a story about one natural resource, its uses, ways it is sometimes misused, and ways people can protect or save it.
- Have students inquire about recycling projects in the community and report these to the class. Make a list on the board; let the class choose a project in which it will participate. For example, once a week newspapers may be brought for paper recycling bin. Glass and aluminum cans are other possible projects.
- Bring samples of stationery, greeting cards, and other items produced from recycled paper. Talk about the natural resource the recycling of paper saves (wood pulp).

EXTENDED ACTIVITIES

- Invite a conservationist to talk to the class about conservation of our natural resources. Have students write a short paper summarizing the points made by the visitor.
- Have children prepare posters during National Fire Prevention Week. Post these around the school building; put the "first prize" poster in the main entrance way.

Learning Center Activities Summary Sheet
(Sheets for Learning Center follow this page.)

A. Listen to story, *Stone Soup* (read aloud, tape, or record)

1. Bulletin Board

   (a) Words Rhyming with *stone*
   (b) Words ending like *soup*
   (c) Words beginning like *soup*

2. Where do they grow? Cut and paste.

3. Sentence building — noun and verb selection fill-in-the-blanks.

4. *-ale* word family — cooking pot with slide — through initial sound strip.

5. Vocabulary word search.

6. Math word problems.

7. Sequence and picture-word puzzles.

8. Soup recipe or soup-can label. Bring from home; later compile for Soup Favorites book to take home.

9. Evaluation — consists of folder showing completed activities, teacher observation of student's listening to the story, and ✓-UP! page for manipulative activities.

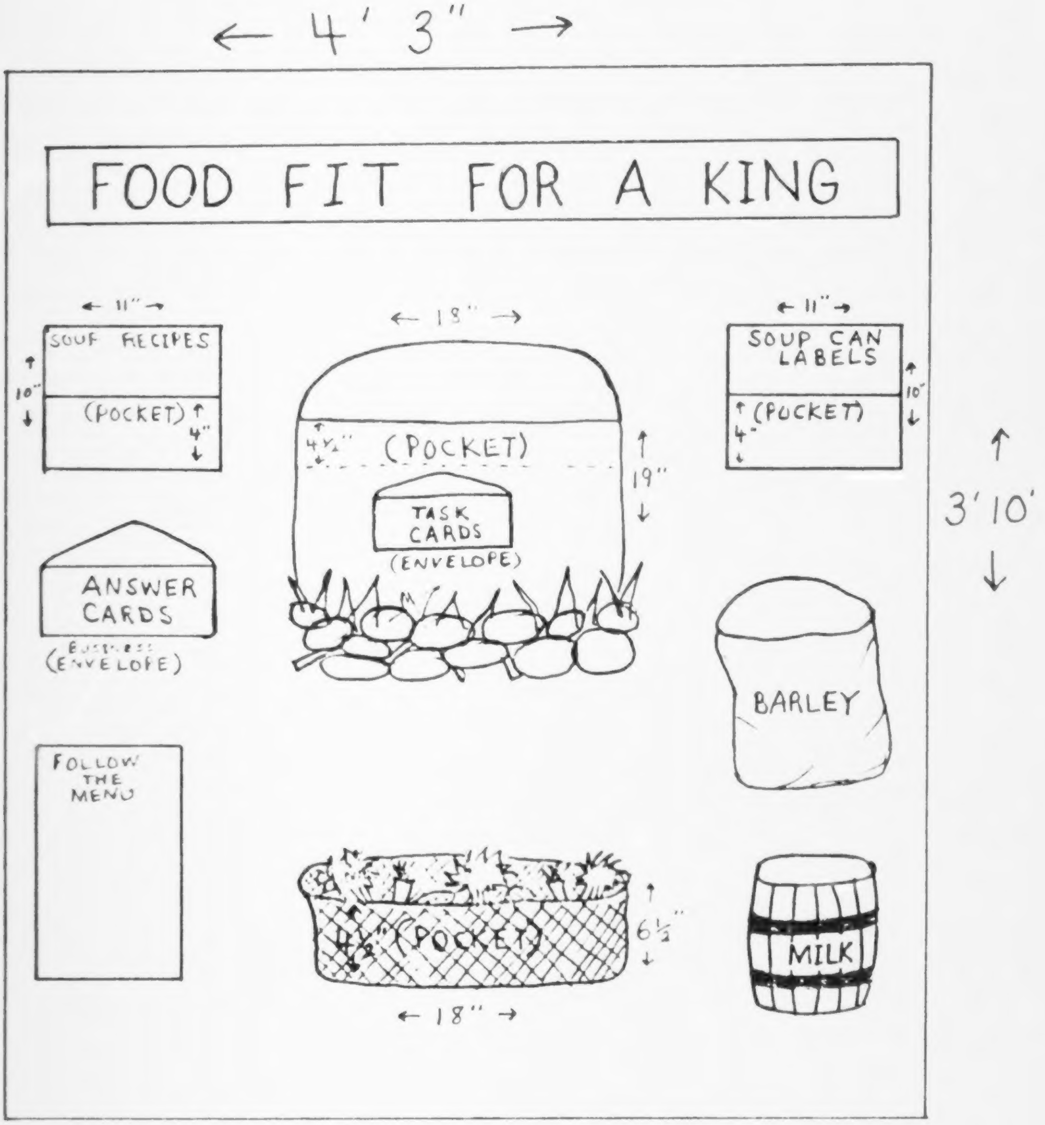
   Optional: Students may make and decorate own *Stone Soup* folders.

Supplies needed to construct Learning Center:

book with record, *Stone Soup*
record player
construction paper
markers, pencil, pen
scissors, tacks, staples or tapes
glue or rubber cement
old workbooks or magazines
small and large envelopes
letters for title:
  FOOD FIT FOR A KING
bulletin board

plain white paper
clear contact paper
large piece of black and
  brown paper (pot, table, and basket)
3 x 5 index cards (white
  and colored)
4 x 6 index cards
cardboard to make holder
  for recipes
TIME

Learning Center Design


← 4' 3" →
FOOD FIT FOR A KING
← 11" →
SOUP RECIPES
10"
(POCKET)
4"
← 18" →
4½"
(POCKET)
19"
TASK CARDS
(ENVELOPE)
← 11" →
SOUP CAN LABELS
10"
(POCKET)
4"
3'10'
ANSWER CARDS
Business
(ENVELOPE)
BARLEY
FOLLOW THE MENU
4½" (POCKET)
6½"
← 18" →
MILK

STONE SOUP LEARNING CENTER LAYOUT

Be sure to check your meal ticket each time.

Follow the Menu!

1. Listen to Stone Soup.
2. Words that rhyme with stone.
3. Words that end like soup.
4. Words that begin like soup.
5. Where do they grow? Cut and paste.
6. Build a sentence.
7. Meet the -ALE family.
8. Vocabulary word search.
9. Math fun!
10. Sequence and picture-word match puzzles.
11. Soup's on! Bring your favorite soup recipe or soup-can label.
12. ✓- UP!

STONE SOUP

WORDS THAT RHYME WITH STONE:

1. READ THE WORDS ON THE VEGETABLES IN THE BASKET.
2. FIND THE WORDS THAT RHYME WITH STONE.
   PUT THESE VEGETABLE WORDS INTO THE SOUP POT.
3. PUT THE OTHER VEGETABLE WORDS BACK INTO THE BASKET.
4. CHECK YOUR STONE RHYMING WORDS WITH THE ANSWER CARD.

STONE SOUP

WORDS THAT END LIKE SOUP:

1. READ THE WORDS ON THE VEGETABLES IN THE BASKET.
2. FIND THE WORDS THAT END LIKE SOUP.
   PUT THESE VEGETABLE WORDS INTO THE SOUP POT.
3. PUT THE OTHER VEGETABLE WORDS BACK INTO THE BASKET.
4. CHECK YOUR WORDS ENDING LIKE SOUP WITH THE ANSWER CARD.

STONE SOUP

WORDS THAT BEGIN LIKE SOUP:

1. READ THE WORDS ON THE VEGETABLES IN THE BASKET.
2. FIND THE WORDS THAT BEGIN LIKE SOUP.
   PUT THESE VEGETABLE WORDS INTO THE SOUP POT.
3. PUT THE OTHER VEGETABLE WORDS BACK INTO THE BASKET.
4. CHECK YOUR WORDS BEGINNING LIKE SOUP WITH THE ANSWER CARD.

ANSWER CARD FOR WORDS THAT BEGIN LIKE SOUP	ANSWER CARD FOR WORDS THAT RHYME WITH STONE
SAILOR	BONE
SAM	CONE
SANDWICH	CLONE
SAT	GONE
SEVEN	HONE
SIT	LONE
SIX	PHONE
SO	ZONE
SUN	PONE

WORDS THAT END LIKE SOUP:

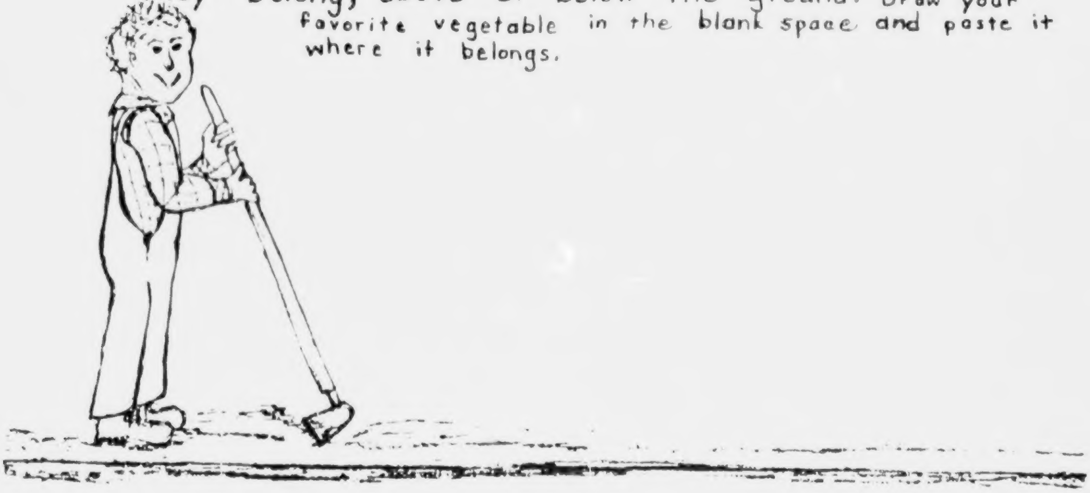
CAP
CUP
MAP
MOP
POP
TAP
TIP
TOP
UP

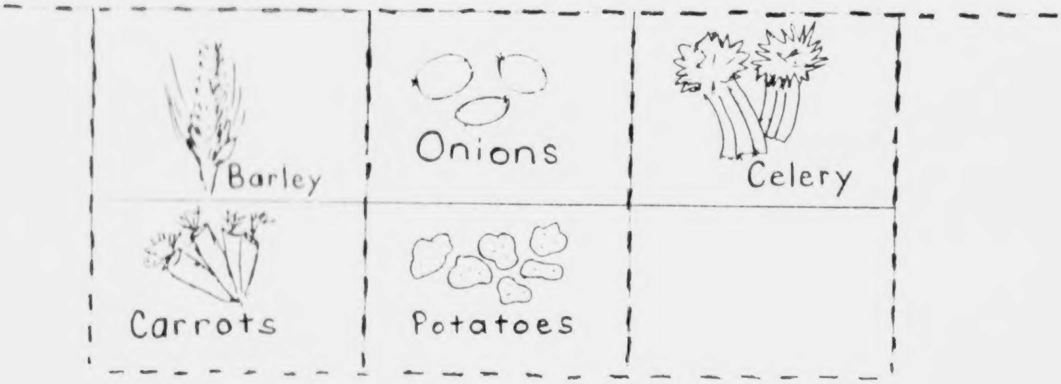
NOTE TO TEACHER: THE ANSWER CARDS FOR RHYMING WORDS, WORDS ENDING LIKE SOUP, AND WORDS BEGINNING LIKE SOUP CONTAIN THE WORDS THAT SHOULD BE WRITTEN ON THE VEGETABLES.

Name ______________________ Date ______________

Where do they grow?

Cut and paste the vegetables and grain where they belong; above or below the ground. Draw your favorite vegetable in the blank space and paste it where it belongs.




Barley
Onions
Celery
Carrots
Potatoes

Name ______________________________ Date ________________

Build a Sentence

1. The __________N were marching home.

2. The __________N __________V their food.

3. The soldiers and villagers had __________N to __________V.

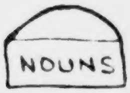
4. A __________N __________V to find more to put into the soup.

5. The __________N __________V on the __________N.

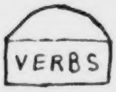
Draw a picture for one of the sentences.

Build a Sentence

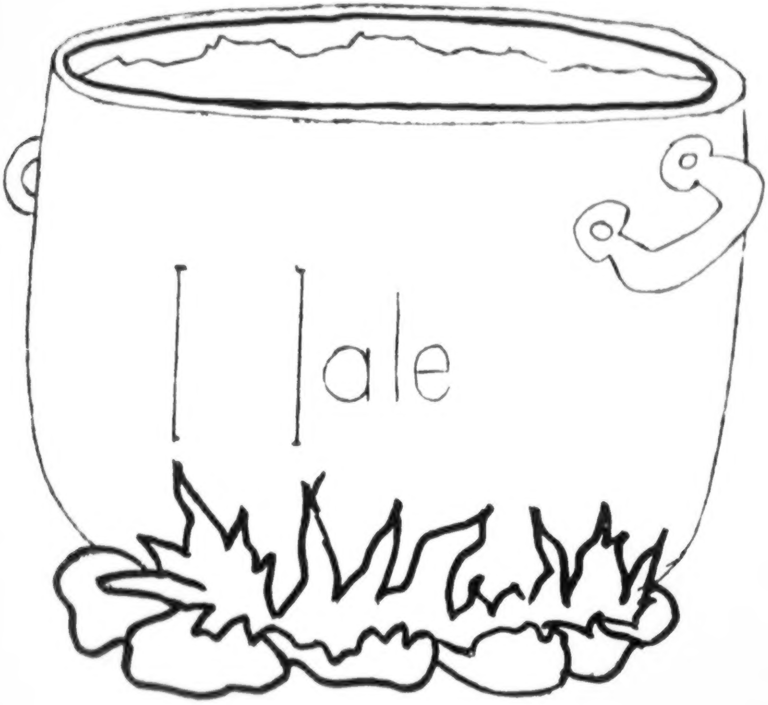
Write the following words on separate index cards (3 x 5). Group as nouns and verbs in labeled envelopes.



king
villagers
meat
soldiers
stone
farmer
food
pot
road
houses
soup



drank
said
eat
made
ran
marching
sleep
danced
hid
cut



st	b	d	g	h	p	s	v	sh	m	t	

Cut out the strip. Cut the slits on the pot. Slide the strip through the pot and read the words.

Name ______________________ Date ______________

VOCABULARY WORD SEARCH

Find the words from the list and draw a circle around them. They may go down or across.

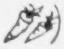
C	R	I	S	P	Q	C	I	D	E	R
H	A	X	Z	E	F	O	M	J	B	N
U	I	T	L	A	C	K	I	N	G	S
N	E	K	W	S	T	A	L	E	Z	P
K	L	S	P	A	R	E	L	R	U	I
P	R	Q	H	N	H	C	E	M	K	T
D	Y	G	V	T	B	A	R	L	E	Y

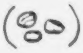
BARLEY
CIDER
STALE
SPARE
PEASANT
PITY
LACKING
CRISP
MILLER
CHUNK

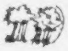
Learning Center Sheets

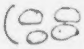
Name ______________ Date ____________

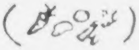
Count.

How many carrots () are in the basket ( )?
____

How many onions ()? ____

How many celery stalks (? ____

How many potatoes ()? ____

How many vegetables () in all? ____

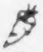
Solve.

4 's
2 more
How many in all?

6 's
3 more
How many in all?

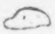
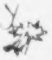
9 's
5 sold
How many are left?

8 's
7 sold
How many are left?

 3¢
5¢
How much money?
¢
¢
¢

4¢
6¢
How much money?
¢
¢
¢

EXTRA FUN !

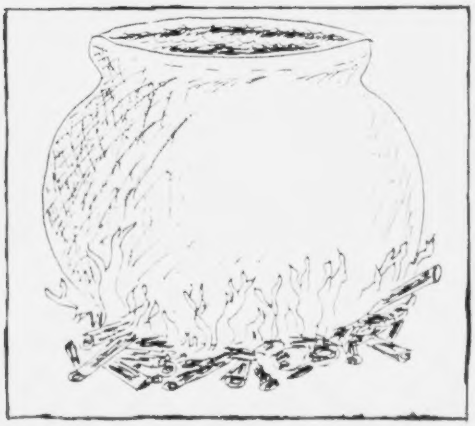
How much money in all for the , , , and ?

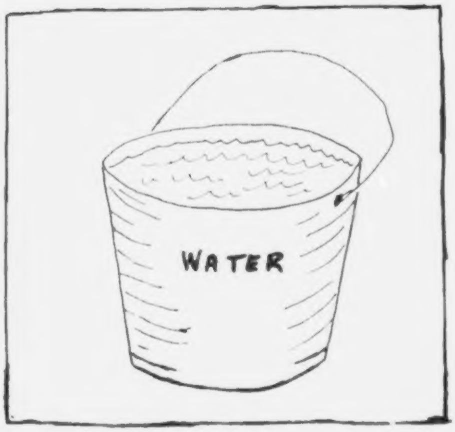
7

Sequence and Picture-Word Match Puzzles

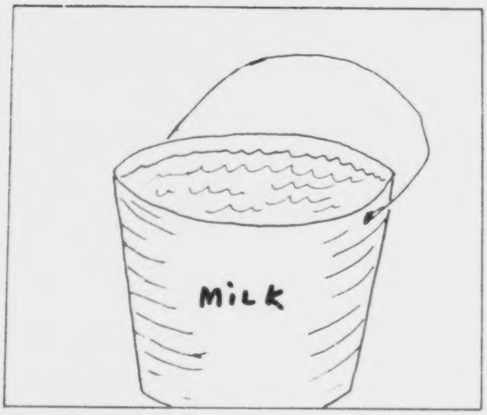
DIRECTIONS:

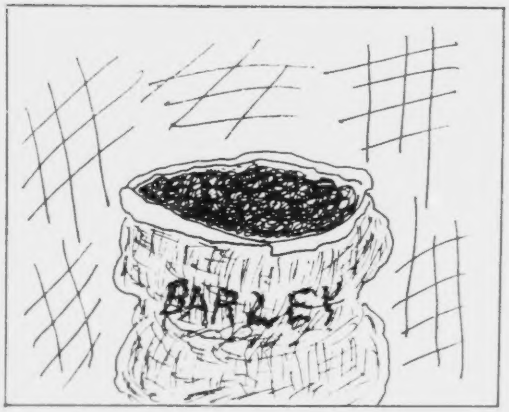
1. Place the pictures in the order they came in the story, Stone Soup.
2. Place the words in the order they came in the story, Stone Soup.
3. Match the pictures and the words.
4. Check the answers on the back of the cards.





Write the words and sequential numbers on the back of each card,

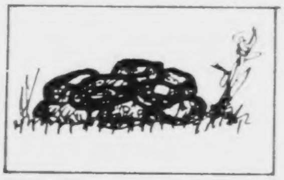


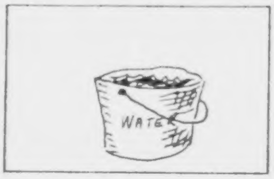


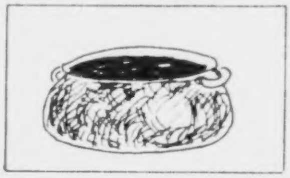
Stones

Water

Pot



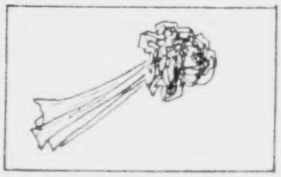


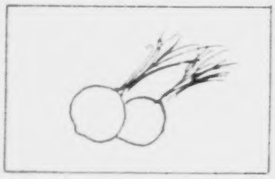


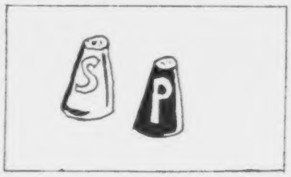
Celery

Onions

Salt
and
Pepper



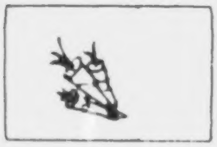


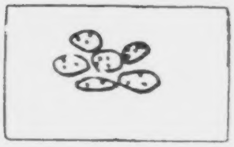


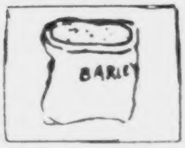
CARROTS

POTATOES

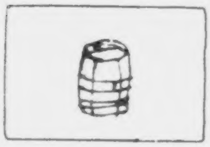
BARLEY







MILK



THE SOUP ITEMS COME IN THIS ORDER:

1. POT
2. WATER
3. STONES
4. SALT AND PEPPER
5. ONIONS
6. CELERY
7. CARROTS
8. POTATOES
9. BARLEY
10. MILK

NOTE TO TEACHER: MAKE THE PICTURE CARDS APPROXIMATELY 2 x 3 INCHES. PUT THE ANSWER (WORD AND NUMBER) ON THE BACK OF THE PICTURE.

MEAL TICKET

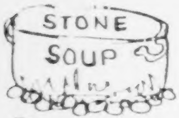
NAME ______________________________ DATE ______________

	1	2	3	4	5	6	7	8	9	10	11	12
TEACHER												

COMMENTS:

NOTE TO TEACHER: DUPLICATE A COPY FOR EACH STUDENT. RECORD YOUR EVALUATION AS THE STUDENT FINISHES EACH ACTIVITY.

NAME ____________________ DATE ______________



√ - UP !

A. Draw a line from stone to its rhyming words.

seven up phone

bone

zone - - - - - - - stone six

sun tone

pop cone cap

B. Circle the words that begin like soup.

lone sandwich tip so cap mop

sailor hone Sam cup pone

C. Draw a box around the words that end like soup.

top sit tap sat clone

gone so up seven cup sun map

D. Write 3 members of the -ale family. stale

__________ __________ __________

E. Write numbers in the blanks to show the order each one came in the story.

__ Stones

__ Carrots

1 Pot

__ Onions

__ Potatoes

__ Water

__ Salt and Pepper

__ Milk

__ Barley

__ Celery

AGRICULTURE IN GEORGIA CLASSROOMS

Grades K-2

UNIT V: The Agricultural System Is Interdependent with All Other Segments of Society

TIME: 2 to 3 Weeks (4 Lessons)

PURPOSE

This unit is designed to help students understand the interrelated roles of the farm and other segments of society in meeting the needs of our people. While each segment of society makes unique contributions, the agricultural system is dependent upon resource markets as well as consumer markets for its continuation; others depend upon the agricultural system to supply food and fiber, to buy products for use on the farm, and to provide jobs for workers.

VOCABULARY

agribusiness
bale
business
capital
consumer
crops
demand
drought
entrepreneur
exchange
food supply
goods
harvest
interdependent
labor
land
opportunity cost
pesticides
plant
processing plants
profit
rural
scarcity
services
specialization
supply
transportation
veterinarian

EVALUATION

Evaluation for this unit should include the following:

- Pretest
- Teacher observation and evaluation of the student's classroom participation
- Checking of worksheets and other assigned tasks, reviewing with students, and recording of grades
- Post test

UNIT V: The Agricultural System Is Interdependent with All Other Segments of Society

LESSON 1: Farms and Cities

PRINCIPLE: Farms and cities are interdependent.

OBJECTIVES

The student will be able to

- describe three city businesses which depend on farming for their success.
- explain why farmers need the support of cities, or of businesses and persons located in the city.

BACKGROUND NOTES

Farms provide cities with their food supply. In order to produce the food supply, the farms must purchase vehicles, equipment, pesticides, and other supplies from the city. Each item requires a manufacturing plant and workers. Workers require food; therefore, they depend on the farms. This is just one example of the interdependency of the farms and the cities.

Both the farms and the cities depend upon someone to transport their goods; they also depend upon someone to be in charge of marketing. The marketing most likely requires financial assistance, which involves a banker or lender of some kind. Vast numbers of people are dependent on the goods and services interrelated with the farms and the businesses. This fact provides an opportunity to introduce the economics concepts of supply and demand. As consumers increase their demand for agricultural products, the agricultural system will increase its supply; and this reaction has an impact upon agribusinesses' supplying equipment and other needs to farmers.

MATERIALS AND AIDS

magazines
scissors
glue
pencils

old catalogs
construction paper (neutral)
folder for each child
Worksheet 5-1

ACTIVITIES

- Lead students in a discussion of why farms and cities need each other. Ask questions such as these: What products from the city does a farm use? What would happen to the farm if it could not get that product?
- Talk about businesses in a community near you that process or market goods from a farm. For example, Kroger has eggs from Georgia poultry farms.
- Lead the students in a class discussion of the effect a cattle farm would feel if a beef-processing plant went out of business. Ask questions such as these: Where do cattle go when they are ready to be slaughtered and prepared as beef? What might happen if the beef-processing plant went out of business? Would that occurrence affect you? If so, how?
- Have students select and cut from magazines pictures that show related farm and city items. Have them glue the pictures on paper in groups of farm-city related items. This page can be placed in the *Farm and City Book* to be developed throughout this unit.
- Have students find agriculture-related terms in the Word Search.

EXTENDED ACTIVITIES

- Have students choose and trace a farm product from its origin to the city and then to a household. They may show the process by drawing or writing. Examples are peanuts into peanut butter, cotton into cloth into clothes, etc.
- Have students write and/or draw a story about a trip to the farm or city and how it is similar to their community.
- Let students select a book to read about the farm or the city. Ask them to write the title and author, a sentence or two telling about the book, and/or draw a picture.

Worksheet 5-1, Unit V, K-2, Lesson 1

WORD SEARCH

O	C	T	Y	O	V	S	U	Q	L
M	A	F	X	W	B	H	W	B	G
E	T	A	J	H	R	E	O	A	S
S	T	O	R	E	N	E	O	K	D
P	L	C	I	A	P	P	L	E	S
H	E	B	U	T	C	H	E	R	K

APPLES
CATTLE
WHEAT
SHEEP

STORE
BUTCHER
BAKER
WOOL

AGRICULTURE IN GEORGIA CLASSROOMS, Grades K-2
UNIT V: The Agricultural System Is Interdependent with All Other Segments of Society

LESSON 2: Farm Communities and the Agricultural System

PRINCIPLE: Farm communities and the agricultural system are interdependent.

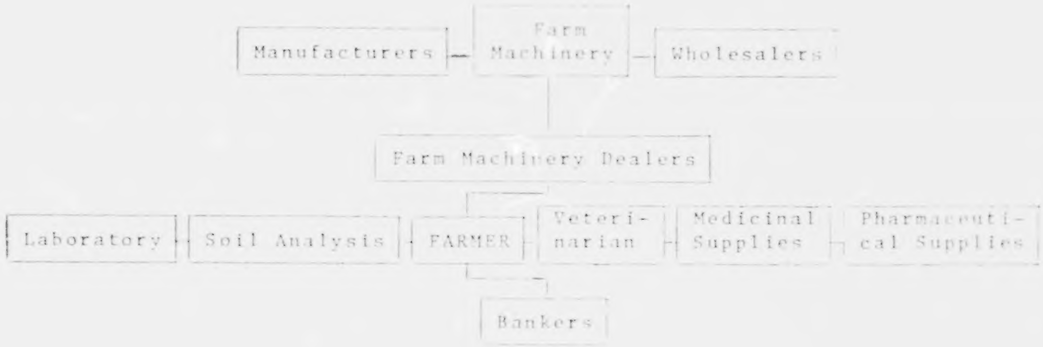
OBJECTIVES

The student will be able to

- discuss ways the agricultural system helps a farm community.
- describe community jobs that depend on the agricultural system.
- discuss how farmers in the local area depend on the community for support.

BACKGROUND NOTES

Many occupations exist because of agriculture. It has been estimated that 88 of every 100 jobs are related to agriculture, A cycle of economic dependency exists among many of the citizens. Veterinarians, farm machinery dealers and mechanics, soil analysts, supply store owners, etc., have very important and direct contact with the farmers. If the path of a product is traced from its source to its end use, many people are involved. The existence of economic dependence among many people is shown in the webbing example below.


Manufacturers
Farm Machinery
Wholesalers
Farm Machinery Dealers
Laboratory
Soil Analysis
FARMER
Veterinarian
Medicinal Supplies
Pharmaceutical Supplies
Bankers

BACKGROUND NOTES (continued)

Another example is shown as follows:

Dairy cow → milk → transportation → processing →
plant → transportation → grocer → consumer.

Rural communities depend upon the agricultural system for employment, food supply, and services.

MATERIALS AND AIDS

- filmstrips: "Living in the City" and "What Is a Community?"
- filmstrip projector (check bulb)
- book, *The Generous Cow*
- chalk and chalkboard or chart paper and marker
- manila paper for drawings for *Farm and City Book*

ACTIVITIES

- View the filmstrip "What Is a Community?" Discuss similarities of the children's communities and the ones presented in the filmstrip. Decide ways the local community is interdependent with the farm and the city.
- View the filmstrip "Living in the City." Have students name jobs in the city. Decide which farm jobs had to be done before the city could exist.
- Have students begin the *Farm and City Book*. This book will show the source of hamburger (beef cow) and points in the supply chain before reaching the students (cattle truck headed for market, slaughtering department, butcher, grocer, owner of a fast-food restaurant). This idea could be used for apples in North Georgia or peanuts in South Georgia.
- Have students add to the *Farm and City Book* the sheet of farm-city related items prepared in Lesson 1. On another page have them draw a picture of the farm job and the city job they would like most to do. Preschoolers may cut pictures from magazines for this activity.
- Build a mural showing the route a commodity takes from the farm to the consumer. Examples of commodities that may be used are apples or peanuts.

ACTIVITIES (continued)

- Read *The Generous Cow* to the class. Have students name the things they get from the cow. Write the list on the chalkboard. Prepare a language experience story on the board, with blanks for students to complete while copying the story. Example:

  A cow gives us many things. The one I like best is __________.
  I like __________ because ____
  ____

Guidance will be necessary for the students to complete the story. Have students draw a picture to go with the story.

EXTENDED ACTIVITIES

- Scavenger Hunt: Hide pictures and/or items representative of the rural community and the agricultural system. Give students a checklist of the items to look for (use pictures or words for the checklist, depending upon students' ability). After students find the items, ask them to explain the interdependence of the items.
- Have students make a scrapbook to show rural community and agricultural-system interdependency.
- Guide students in preparing an interview for a farmer and a rural-community citizen. Have questions about their opinions of why rural communities and the agricultural system are interdependent. Interviews may be written or typed.
- Use the game "The Sandwich" from *Dictionary Skills Gameboards*. This game could be played according to directions to teach the skill of root words. However, the gameboard could be adapted for greater suitability to the agricultural topic. Each time a player lands on the food item, have him/her name the food, the source (if applicable), or something made using that food.

AGRICULTURE IN GEORGIA CLASSROOMS, Grades K-2
UNIT V: The Agricultural System Is Interdependent with All Other Segments of Society

LESSON 3: Transportation Centers and Farm Communities

PRINCIPLE: Farm communities are dependent on transportation systems.

OBJECTIVES

The student will be able to

- identify the various methods of transportation.
- identify the methods of transportation available to local farmers.
- explain why transportation is very important to farmers.

BACKGROUND NOTES

Every community needs transportation in order to ship goods within the state, across the country, and around the world. Well-built and well-maintained highways, airports, railroads, and waterways are necessary for the transportation of the farmer's products to markets. The convenience of locating near transportation centers to meet transportation needs caused rural communities to grow up around such centers. The seaport city of Savannah, Georgia, began as a farming community which later was connected to other communities by highways, railroads, and airports.

Farmers need to transport their goods to markets in order to be able to purchase goods to satisfy their needs and wants. Some seaport cities have all of the aforementioned transportation methods. Some interior large cities have all transportation methods if they are located on navigable rivers. Other suburban communities might have only highways and/or railroads for transportation, and must connect with air and water transportation in the larger cities.

In connection with the discussion of this background, students should identify the types of local transportation methods and vehicles.

MATERIALS AND AIDS

roll of newsprint
masking tape
markers, crayons, or paint
  for mural
community speaker involved in
  one of the locally available
  methods of transportation
Worksheet 5-2
book on transportation

ACTIVITIES

- Present the picture book *Anno's U. S. A.*, or another book on transportation. Instruct students to look closely for transportation around rural communities and the relation of that transportation to the growth of the community.
- Have students do a mural showing the different stages of a rural community's development around a transportation center. Trucks and trains are major transporters in Georgia.
- Invite a train engineer, trucker, or another person involved in transportation to speak to the students about the community surrounding the transportation center for which the person works.
- Have students complete a word search of various types of transportation. Use Worksheet 5-2.

EXTENDED ACTIVITY

- Keep for one week in the classroom a list of farm commodities students see being transported. This list may include milk trucks; poultry trucks; log trucks; rail cars containing grain; cattle trucks; etc. This information can be transferred to a page in the *Farm and City Book*.

Worksheet 5-2, Unit V, K-2, Lesson 3

WORD SEARCH
TRANSPORTATION

E	B	I	C	Y	C	L	E	B
T	A	S	J	P	M	T	G	J
R	C	H	L	I	O	R	K	E
U	A	I	R	P	L	A	N	E
C	R	P	H	N	D	I	Z	P
K	B	O	A	T	F	N	Q	C

BOAT
AIRPLANE
TRUCK
TRAIN
BICYCLE
CAR
SHIP
JEEP

LESSON 4: Farming as a Career

PRINCIPLE: Farming is a career for many people.

OBJECTIVES

The student will be able to

- explain that farming is the way some families earn a living.
- describe the skills and knowledge needed by a farmer to be successful.

BACKGROUND NOTES

Many families are farmers for various reasons. In early days farming provided the daily needs of the immediate family. Farms were passed on to the farmers' children, who carried on the family tradition. A farmer had a great investment of time and money in his farm as he became constantly involved in improving his land, preserving its quality, and making the land more productive.

As his needs increased, the farmer needed to make a profit to have the money to provide for those needs. Many factors affected the amount of profit a farmer made. Weather, supply of resources, and demand for the farmer's crops are but a few of the factors affecting profit. The farmer must increase his ability to deal with all these factors — through education of many kinds. He must have awareness and understanding of how to deal with weather conditions and insect pests, wise use of resources, and forecasts of future world needs for farm products.

The number of farms in the United States has decreased drastically in the last 50 years. However, the remaining farms have generally grown larger and have become more specialized. A farmer might grow more of one crop rather than a wide variety of crops. A farmer might plant many acres in soybeans or corn or wheat, or he might develop his farm as a dairy or poultry farm. The farmer will then depend on others to process his poultry or store his grains until they are sold to be processed, transport and process his dairy produce, and provide the fertilizer he will need to buy for his fields. All these allied businesses are called agribusiness; they all help the farmer in his career.

MATERIALS AND AIDS

Holt reading textbook *A Place for Me*, Level 7, or another book with a careers section
copy of song "With a Munch, Munch, Munch" (Worksheet 5-3)
tape recorder with tape
pictures of farm equipment, such as John Deere, mounted on flashcards
markers, crayons, pencils
magazines
scissors
glue
guitar, autoharp, or piano
chalk, chalkboard or chart and marker
clothing and tools from home to represent agricultural careers
local farm and local farmer
large picture of a farmer for bulletin board
manila paper and handwriting paper

ACTIVITIES

- Have students turn to pages 156-157, Holt Level 7 book, *A Place for Me*, or other source with a section on careers. Look at the section called "Careers." Read the captions with the pictures and discuss any other careers related to agriculture. Introduce the productive resources of land, labor, capital, and entrepreneurship. Distinguish agricultural careers from nonagricultural careers.

- Introduce the concept of capital goods (tools, equipment, fertilizers, buildings, land, etc.) necessary for someone involved in agricultural production. Have the children brainstorm a list; write the list on the board or on chart paper.

- Ask students to come dressed as a farmer, and bring a tool or a picture of a tool representative of their career. Have them tell the class two or three things about their outfits, or pantomime the role they represent.

- Teach the song "With a Munch, Munch, Munch" (Worksheet 5-3). Instruct students to point out what the farmer provides for the dairy cow and what products the farmer receives from the dairy cow.

- Take students on a field trip to a specialized farm (poultry, dairy, vegetable, horse, or tree farm, for example). Ask them to write or tape record a short story about the farm they visited.

ACTIVITIES (continued)

- Have students make a collage of products that come from a particular specialized farm, such as a dairy farm. Put the farmer at the center with the specialized products surrounding the farmer. This collage might go on the bulletin board or in the *Farm and City Book*.

EXTENDED ACTIVITIES

- Have students record an interview with a farmer. Guide them in preparing questions such as the following: What type of farming business do you have? Who buys your products? How do you use your profits?

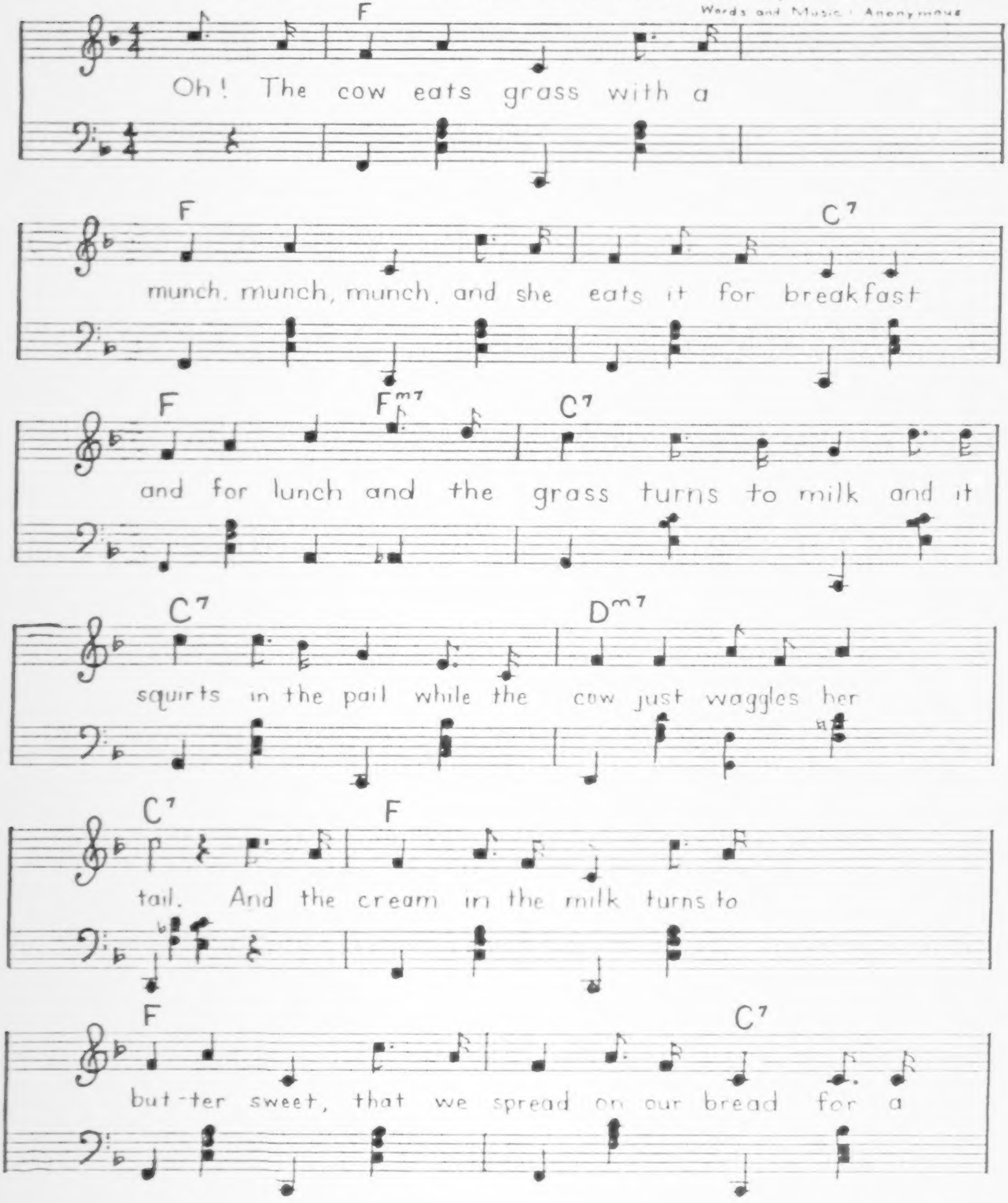
- Instruct students to draw a picture of a specialized farm. Have them dictate a story about the farm; then write the story under the picture. Students who can do so should write their story themselves.

- Have a farmer visit the classroom, talk to the students, and answer their questions.

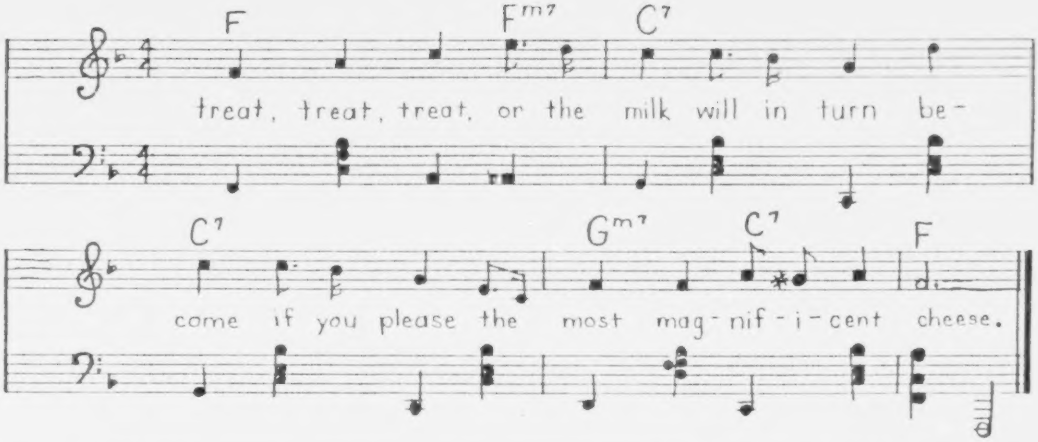
Worksheet 5-3, Unit V, K-2, Lesson 4

WITH A MUNCH, MUNCH, MUNCH

Words and Music: Anonymous


F
Oh! The cow eats grass with a
F C7
munch, munch, munch, and she eats it for breakfast
F Fm7 C7
and for lunch and the grass turns to milk and it
C7 Dm7
squirts in the pail while the cow just waggles her
C7 F
tail. And the cream in the milk turns to
F C7
but-ter sweet, that we spread on our bread for a

G. Schirmer Inc. New York 12 Staves No. 5 - Printed in the U.S.A.


F
Fm7
C7
treat, treat, treat, or the milk will in turn be-
C7
Gm7
C7
F
come if you please the most mag-nif-i-cent cheese.

PLAY SUGGESTIONS

Children can enact the whole procedure: The cow eating grass, being milked, and wagging her tail; churning the butter, spreading the butter on the bread, and eating the cheese.

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AGRICULTURE IN GEORGIA CLASSROOMS

Grades K-2

UNIT VI: Agricultural Production and Distribution Are Globally Interdependent

TIME: 1 Week (2 Lessons)

PURPOSE

The purpose of this unit is to help students gain an understanding of the importance of trade with other countries. A basic idea for student understanding is that some of our food and fiber is obtained from other countries and that the United States sells some food and fiber to other countries.

VOCABULARY

clothing
depend
export
fiber
goods
import
interdependence
produce
product
trade

EVALUATION

Evaluation for this unit should include the following:

- Pretest
- Teacher observation and evaluation of student's classroom participation
- Checking of worksheets and other assigned tasks, reviewing with students, and recording of grades
- Post test

AGRICULTURE IN GEORGIA CLASSROOMS, Grades K-2
UNIT VI: Agricultural Production and Distribution Are Globally Interdependent

LESSON 1: Food and Fiber from Around the World

PRINCIPLE: Food and fiber are obtained through world trade.

OBJECTIVES

The student will be able to

- identify food products we use that are grown in other countries.
- identify clothing fibers we use that are grown or produced in other countries.

BACKGROUND NOTES

The United States began trading with other countries of the world long ago. World trade is the exchange of goods and services between countries. We buy goods from France, Germany, China, England, and other countries. In turn, people in these countries buy goods from us. We trade with many countries.

In the early days the United States had only a few factories. It, therefore, imported many manufactured goods to meet the needs and wants of its citizens. As technology improved, American farms turned out more products than Americans needed. These products were exported, or shipped to other countries. As American factories made more goods, some of those goods were exported, too.

At the same time, many people in the United States could afford to buy more goods. They wanted more sugar than could be produced in the United States; they drank more tea and coffee than previously; they needed more raw materials for factories producing clothes, automobiles, etc. Consequently, the United States began importing more and more goods.

MATERIALS AND AIDS

First Book of Supermarkets by Jeanne Bendick
assorted newspapers/magazines
construction paper
plastic margarine containers
map of United States
world map
map pins
globe
small objects (blocks, buttons, etc.) of one color

ACTIVITIES

- Ask the class, "Where do all the foods found in the supermarket come from?" After responses are given, read two sections of the book, *The First Book of Supermarkets*, pages 4-7, by Jeanne Bendick. It lists some of the items found in a supermarket and the countries from which they come. Ask the children if they have seen any items in their homes that are made/produced in our country. Ask if they have seen any items produced in other countries. Show them two or three domestically produced and two or three imported items found in your home. For homework ask the children to look on toy/game boxes, food packages, clothing labels, etc., for items made in our country and items made in other countries. With parents' help, children can list each item and the geographical area (state or country) in which it was produced. It is a good idea to send a note home to ask for parents' help on this assignment.

  When the lists are brought to school, ask the children why they think each of the items is produced in its particular area. Explain that these areas have the resources — land, climate, workers, etc. — needed to make or grow these things.

- Display a large map of the United States. Label the map "State Products Map." Direct students to draw, color, and cut out pictures or symbols of the goods produced in the United States which they and their parents identified. With map pins, tack each product picture or symbol on the state in which it was produced. Ask the children, "Do we need these different products grown or produced in other states? Do people in other states need or use any products grown or produced in Georgia?" (Maps, Lesson 1)

  Next to the map of the United States display a world map, and develop a product similar to the one described above but labeled "Products from Other Countries." Ask the children, "Do we need these different products grown or produced in other countries? Do you think people in other countries might use products grown or produced in the United States?"

- Plan a trip to an apple orchard, a dairy farm, or another place where people specialize in producing a particular product. Discuss the resources the workers use to produce their product (land, animals, machinery, climate, water, etc.). Conclude that those workers specialize in producing that product because they have special

ACTIVITIES (continued)

skills and/or the right resources to do so. Expand this understanding to include the reasons why certain countries produce certain products; e. g., Norway — fish products; New Zealand — lamb; Taiwan — clothing; Honduras — bananas; Brazil — coffee. Have students locate and cut out pictures of goods which are produced in various states. For example, these are illustrative:

peanuts — Georgia
oranges — Florida
corn — Iowa
oil — Texas
cars — Michigan
cotton — Missisippi
beef — Wyoming
aircraft — California
potatoes — Idaho
cheese/milk — Wisconsin
lumber — Maine
wool — Utah

On a large map of the United States tack each product picture to the state(s) which produce(s) it. Label the map "Products from Many States." After children locate their own state on the map of their country, direct their attention to the products on the map for their state.

Ask, "Do Georgians use all of the items you see on the United States map?" Help students understand how many things we use/need come from other parts of our country. Can you think of any other foods or products produced in other states? Why are certain products produced in certain states? (They have the resources available — water, trees, land, climate, soil, animals, factories, workers, etc. — to produce these items easily. Therefore, they specialize in those products.) Conclude, "We depend on people in other states to produce many things we need. We also depend on people in other countries for some of the goods we use."

- Invite the principle or another teacher in the school to your class to talk about the different items they use in a typical day which have been grown or produced in other countries. These are illustrative:

coffee — Colombia
bananas — Central America
olives — Middle East
Toyota — Japan
television set — Japan
fill-up of gas at gas station — Saudia Arabia
shirt — Taiwan or Korea
shoes — Italy
porcelain — Germany

- Divide your class into small groups of three or four children. Give each group a plastic margarine container or other item to represent an island. Give each group small objects (blocks, buttons, etc.) of *one* color only.

ACTIVITIES (continued)

Each group should have as many of the small objects as there are groups, so that after trading everyone has one of each others' small objects. Now give each group a piece of plastic food (this is what their island or country produces). Say, "Red, your country growns only oranges. Yellow . . . bananas, etc."

Tell a story of how tired the people on Apple Island became of eating apples. They wanted to grow something new and different, but they couldn't grow anything else. They realized that Banana Island had something they wanted. So, they traded one apple for one banana from Banana Island. Continue this story until every island has one of each type of food. Explain to the class that because they traded, they now have a greater variety of things to eat (from *The Elementary Economist*, Volume 6, Number 3, pages 4-5).

EXTENDED ACTIVITIES

- Bring to class current newspaper/magazine articles which focus on goods obtained from other countries. Invite the manager or a buyer from a local department or clothing store to the classroom to identify goods from other countries sold in the store. Invite a supermarket manager to the classroom to identify food products grown or produced in other countries and sold in the store. Encourage these resource persons to bring actual examples for the students to see, feel, etc.

- Help students construct a bulletin board composed of food labels, clothing labels, etc., representing growth or production in other countries. Use yarn to connect items to the correct location on a world map located in the center of the bulletin board. Encourage students to bring examples from home for inclusion on the bulletin board.

  Use newspapers, magazines, etc., to find products of other countries which are sold in the United States.

- Use products from other countries (brought to school by students) to set up an International Products Fair.

- Help students determine how products from other countries are transported to the United States (ship, train, plane, carts, etc.).

LESSON 2: Food and Fiber from the United States to the World

PRINCIPLE: Food and fiber produced in the United States are sold to other countries.

OBJECTIVES

Students will be able to

- list the food products that are produced in the United States and sold to other countries.
- identify fibers or products made from fibers produced in the United States and sold to other countries.
- identify Georgia food and fiber products which are sold to other countries.
- identify food and fiber products grown in the local area and sold to other countries.

BACKGROUND NOTES

The United States is the world's leading exporter of farm commodities. With less than three-tenths of one percent of the world's farmers, the United States produces these amounts of the world's total food supply: soybeans, 64 percent; grapefruit, 56 percent; corn, 46 percent; sorghum, 31 percent; oranges, 25 percent; poultry, 24 percent; green peas, 23 percent; beef, 23 percent; cotton, 18 percent; wheat, 17 percent; eggs, 14 percent; and pork, 13 percent.

The United States exported nearly 44 billion dollars' worth of farm products in 1981, giving us a favorable balance of trade in agriculture (more exports than imports) of almost $27 billion. More than one million people in the United States work in jobs related to farm exports. In 16 states, one third to one half of the farm income comes from agricultural exports.

Noted Georgia exports include carpet, poultry, peanuts, tobacco, soybeans, lumber, and Coca-Cola.

MATERIALS

newspaper/magazines of
other countries
Coca-Cola, 3 oz. per child
encyclopedias
peanut butter
bread globe

ACTIVITIES

- Invite a parent who has done some overseas traveling (or another extensive traveler from the community) to the class to tell students about food and fiber products made/produced in the United States which they saw or used when they were out of the country. Follow up by having each student select and draw a picture of one of the items on a chalkboard listing developed by the resource person. Use pictures for a display titled "American Products Around the World."

- Obtain from a regional library, college/university library near you, or a foreign language teacher in your high school, copies of newspapers, magazines, etc., from other countries. With the class go through the materials to identify ads for food/fiber and other products of the United States. Ask, "Why would people in ________ want to buy ________ from the United States?"

- Read encyclopedia "stories" of United States food and fiber products which are exported. Use the globe to help students learn locations of other countries which buy specific export products.

- Make a class snack of small peanut butter sandwiches and small cups of Coca-Cola. Tell students that as they are eating their snack they are to think about how the two foods are alike. After the eating develop a list of student responses. If students don't mention it, ask cueing questions to get at the fact that both Coca-Cola and the peanuts from which peanut butter are made are well-known Georgia products. Ask students if they have ever visited relatives in another state. If they have, ask if those relatives eat peanut butter or drink Coke. Then explain that these products of Georgia are sold throughout the world. Other well-known Georgia products extensively exported are tobacco (cigarettes), poultry products, and soybeans.

ACTIVITIES (continued)

- Ask students to develop a list of means by which they could prove that people in other countries use products grown or produced in the United States.

  Bring to the class examples of food and fiber products from the local area which are exported to other countries. For example:

  Northwest Georgia — carpet (containing wool)
  Northeast Georgia — poultry products
  Atlanta Metro area — Coca-Cola concentrate
  Southwest Georgia — peanuts, cotton
  Southeast Georgia — soybeans, tobacco
  Products from plants/locations throughout the state: lumber, clothing

  Have class discuss how the products get from their area to other countries of the world.

- Have each student draw a picture of a Georgia product which is exported. Under the picture the student is to write one sentence about the product.

EXTENDED ACTIVITIES

- Read some trade books to the class about some product we export.
- Ask the librarian to develop a small reading center about United States products which are exported.
- Check student folders to determine if any parents are engaged in production of a good which may be exported.
- Invite a student from a nearby college who has been on an overseas exchange program (or an exchange student) to come to the class and tell students about American products used in the other country.
- Read to the class, or tell about, the news items on the following page and discuss.

- What do the following news clippings reveal about the effect of climate on growth of specific products?

8 J The Atlanta Journal □ THE ATLANTA CONSTITUTION SUNDAY, APRIL 27, 1986

A bitter harvest for American farmers

■ **Altered Harvest: Agriculture, Genetics, and the Fate of the World's Food Supply**. Jack Doyle. Viking, $25

By Lewis Regenstein
Special to The Journal-Constitution

American agriculture in 1986 finds itself in an awful mess.

A record number of farmers faces bankruptcy, foreclosure, and/or loss of their farms. Ironically, the more bountiful the harvests, the worse the situation gets, as surpluses drive prices down, and the taxpayer, as usual, is stuck with the bill for tens of billions of dollars annually for agricultural subsidies such as buying up and storing products that the market cannot absorb. Indeed, under the free-market, free-enterprise oriented Reagan administration, the agricultural sector of the economy has been virtually socialized, with annual federal subsidies reaching over $20 billion, and most of the handouts going to the largest operators and agribusiness conglomerates.

Once the domain of the small family farmer, agriculture in America is now becoming an industry for the agribusiness giants, a government-controlled, government-subsidized, and government-created mess that is destroying the family farm while helping to drive up the $200 billion yearly deficits that threaten to bankrupt the nation.

WALTER CUMMING/Staff

Jack Doyle's hardhitting and provocative book tells us that American agriculture may soon be radically changing, but probably not for the better. According to Doyle, an official with the Environmental Policy Institute, a conservation and public interest group in Washington, D.C., America is entering a new era in which our food production system will be controlled by genetic manipulation. Our food-growing system will be characterized by such exotic techniques as the "embryo engineering" of livestock and gene-splicing in plant crops.

Moreover, Doyle warns of the possibility of corporations gaining an OPEC-like monopoly of our food production system, by securing patents on plants, seeds, microbes and genes. Indeed, the sale of seeds is already big business, amounting to some $7 billion in the U.S. and $20 billion worldwide.

And by emphasizing monocultures in striving for greater efficiency over the short term, we are creating the threat of massive losses in the future if a disease or pest moves in that thrives on that particular variety being grown. As Doyle points out, "Many of our crops and livestock are 'genetically uniform,' just waiting for the right disease or pest to strike. ... We need only look to the recent havoc created by the Mediterranean fruit fly in California, the Avian influenza outbreak in the Middle Atlantic poultry belt, and the new strain of citrus canker in Florida to be reminded of how quickly small insects and microbes can bring modern agriculture to its knees."

One of the strongest parts of the book is how Doyle details the scandalous way in which prestigious scientists and educators have been bought and paid for (often as consultants) by major corporations, and then, posing as independent experts, defend toxic pesticides and other hazardous products produced or used by their benefactors, who get enriched by these products while the public gets poisoned and otherwise harmed. Doyle describes how officials of the National Academy of Sciences, "the nation's most influential science institution, a premier body of eminent scientists ... operating from a marble headquarters building in Washington, D.C.," attacked Rachel Carson's monumental book "Silent Spring" as "science fiction," while at the same time being on the payroll of the same chemical companies whose pesticides Carson was exposing as dangers to the public health.

"Altered Harvest" is not light reading; indeed, it is crammed full of facts, figures, tables, statistics, and notes. But such detailed documentation is essential in a book that makes such serious charges and paints such an alarming picture of our food production system.

Doyle makes a convincing case that such alarm is justified and that the costs and dangers of genetically transforming our agricultural system may far outweigh the potential gains. But he also makes it clear that because of the "politics of food production," we will probably continue travelling down this road that may well be leading us to disaster. ■

Lewis Regenstein, vice president of the Fund for Animals and author of "America the Poisoned," writes frequently on environmental issues.

Radiation over crops

WASHINGTON (AP) — Radiation apparently still seeping from the crippled Chernobyl nuclear power plant is now drifting over some of the Soviet Union's most important farmland, the Agriculture Department said.

Due to a shift in wind, the radiation is now being carried over parts of the western Ukraine, one of the most productive winter wheat areas in the Soviet Union, Norton D. Strommen, chief meteorologist for the department's World Agriculture Outlook Board, said Thursday.

The Ukraine is the heart of Soviet agricultural production, with farmland, climate and rainfall roughly comparable to the United States corn belt, experts say.

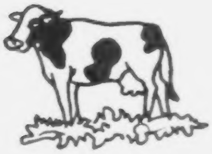
Rome News-Tribune
Friday, May 2, 1985

BEST COPY AVAILABLE

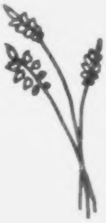
AGRICULTURE IN GEORGIA CLASSROOMS PRETEST/POST TEST
Kindergarten

1. WHERE DOES BREAD COME FROM?

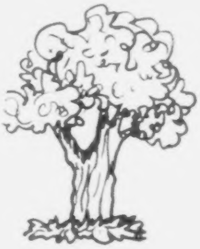
COW



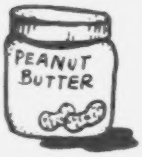
WHEAT



TREE

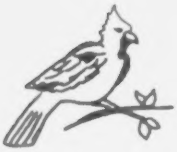


JAR

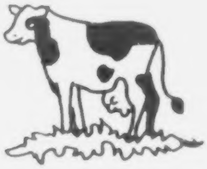


2. WHERE DOES MILK COME FROM?

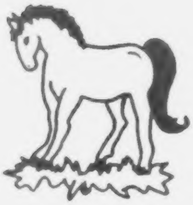
BIRD



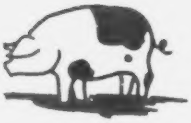
COW



HORSE



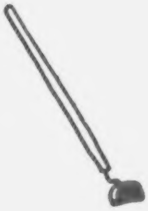
PIG



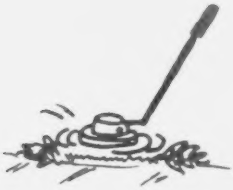
AGRICULTURE IN GEORGIA CLASSROOMS PRETEST/POST TEST
Kindergarten

3. WHAT DID THE EARLY SETTLERS BRING FROM THE OLD COUNTRY?

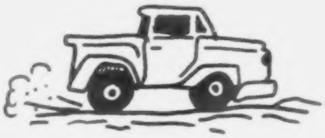
HOE



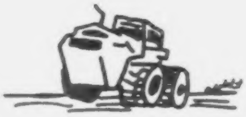
WEED EATER



TRUCK

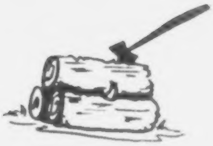


TRACTOR

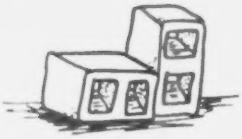


4. WHAT WERE PIONEER HOMES MADE FROM?

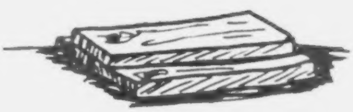
LOGS



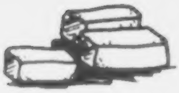
CEMENT BLOCK



LUMBER



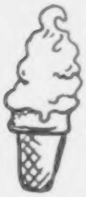
BRICKS



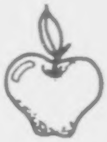
AGRICULTURE IN GEORGIA CLASSROOMS PRETEST/POST TEST
Kindergarten

5. WHICH IS A HEALTHY SNACK?

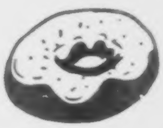
ICE CREAM



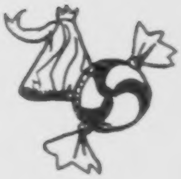
APPLE



DOUGHNUTS

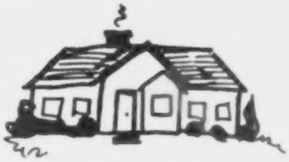


CANDY

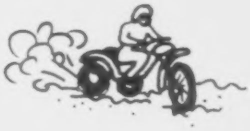


6. WHICH OF THESE IS A BASIC NEED?

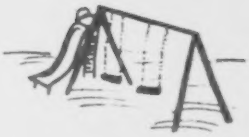
HOUSE



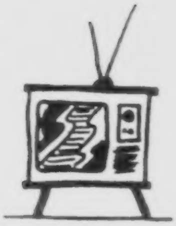
THREE WHEELER



SWING SET



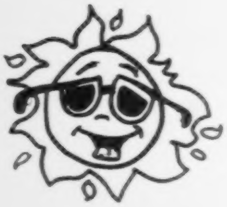
T. V.



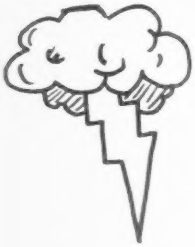
AGRICULTURE IN GEORGIA CLASSROOMS PRETEST/POST TEST
Kindergarten

7. WHAT DO PLANTS NOT NEED TO GROW?

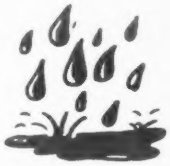
SUN



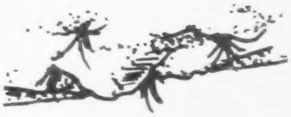
LIGHTNING



RAIN

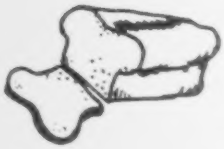


SOIL

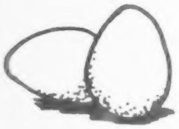


8. WHICH IS IN THE FRUIT FAMILY?

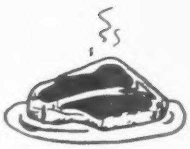
BREAD



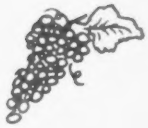
EGG



STEAK



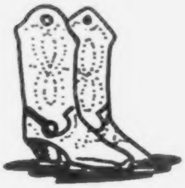
GRAPES



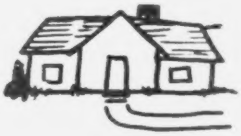
AGRICULTURE IN GEORGIA CLASSROOMS PRETEST/POST TEST
Kindergarten

9. WHICH IS A NATURAL RESOURCE?

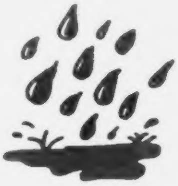
BOOTS



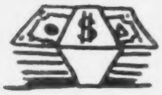
HOUSE



RAIN

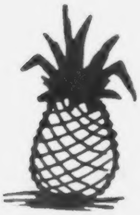


MONEY

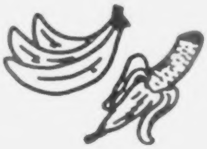


10. WHAT CAN GROW IN YOUR COMMUNITY?

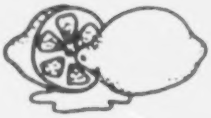
PINEAPPLE



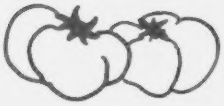
BANANA



LEMONS



TOMATOES



KEY TO

AGRICULTURE IN GEORGIA CLASSROOMS

TEST FOR KINDERGARTEN

1. wheat
2. cow
3. hoe
4. logs
5. apple
6. house
7. lightning
8. grapes
9. rain
10. tomatoes

AGRICULTURE IN GEORGIA CLASSROOMS

PRETEST/POST TEST GRADES 1-2*

1. If you were a pioneer boy or girl, where would you most likely have lived?

   (a) farm
   (b) city
   (c) town
   (d) mountains

2. What were pioneer homes made from?

   (a) logs
   (b) bricks
   (c) bamboo
   (d) cement blocks

3. What crop did the Indians introduce to the pioneers?

   (a) potatoes
   (b) sugar
   (c) corn
   (d) tea

4. Savannah is located where it is because of the

   (a) rivers
   (b) mountains
   (c) buildings
   (d) trees

5. All of the following are basic needs except

   (a) shelter
   (b) food
   (c) T. V.
   (d) clothing

6. Most of our oranges are grown in

   (a) Florida
   (b) New York
   (c) Alabama
   (d) Tennessee

*Teachers will read stems and answers for Pretest.

7. What is grown in your community?

   (a) tomatoes
   (b) oranges
   (c) pineapples
   (d) bananas

8. Fish belongs to which of the basic food groups?

   (a) meat group
   (b) fruits and vegetables group
   (c) milk group
   (d) bread group

9. Which is the healthiest snack food?

   (a) candy
   (b) potato chips
   (c) raisins
   (d) doughnuts

10. A natural resource is

    (a) water
    (b) money
    (c) clothes
    (d) paper

11. We protect our topsoil because

    (a) it grows plants
    (b) it can wash away
    (c) it can blow away
    (d) all of these

12. Which of these do crops need to grow?

    (a) water
    (b) soil
    (c) sunshine
    (d) all of these

13. Which resources cannot be replaced?

    (a) trees
    (b) coal
    (c) soil
    (d) cattle

14. What are your local water resources?

    (a) ponds
    (b) creeks
    (c) rain
    (d) all of these

15. Why do we protect our water? So

    (a) we can drink it
    (b) fish can live in it
    (c) we can swim in it
    (d) all of these

16. You can conserve our natural resources by

    (a) not wasting water
    (b) turning off light switches
    (c) not wasting paper
    (d) all of these

17. What does a farmer buy in town?

    (a) water
    (b) seeds
    (c) soil
    (d) sunshine

18. Which job is dependent on farming?

    (a) teacher
    (b) fireman
    (c) preacher
    (d) meat cutter

19. How do farmers get their products to market?

    (a) trucks
    (b) bikes
    (c) canoes
    (d) three-wheelers

20. What would happen if farmers could NOT get their products to market?

    (a) the products would spoil
    (b) farmers would make money
    (c) the farmer's family would get fat
    (d) the robbers would steal it

21. How do farmers make money?

    (a) by selling their crops
    (b) eating all their crops
    (c) giving their crops to neighbors
    (d) leaving crops in the field

22. Which is a product we get from other countries?

    (a) peaches
    (b) bananas
    (c) apples
    (d) strawberries

23. Which fiber do we get from other countries?

    (a) silk
    (b) cotton
    (c) wool
    (d) nylons

24. Which products does the U. S. export?

    (a) wheat
    (b) coffee
    (c) spices
    (d) bananas

25. Why does the U. S. export grains?

    (a) we have more than we need, and others are starving
    (b) there is not enough
    (c) we don't like the taste
    (d) bread makes us fat

26. Which Georgia product is sold to other countries?

    (a) oranges
    (b) peanuts
    (c) lettuce
    (d) coffee

KEY — GRADES 1-2 PRETEST/POST TEST
AGRICULTURE IN GEORGIA CLASSROOMS

1. a
2. a
3. c
4. a
5. c
6. a
7. a
8. a
9. c
10. a
11. d
12. d
13. b
14. d
15. d
16. d
17. b
18. d
19. a
20. a
21. a
22. b
23. a
24. a
25. a
26. b

Glossary for K-2

Agriculture in Georgia Classrooms

agribusiness — a business that buys and sells anything (i. e., fertilizer, seeds, packages, transportation) needed to produce food, clothing, and shelter

agricultural products — crops, timber, livestock, or poultry raised by farmers

agriculture — the use of land to produce crops, to grow timber, or to raise livestock and poultry; farming

alfalfa sprouts — seeds of the alfalfa plant that are just beginning to grow, used as a vegetable; alfalfa shoots

available — easy to get and ready to use

bale — large collection of hay or cotton tied together

bank — a building or an office for receiving, lending, exchanging, or safely storing money

banker — a person who owns or manages a bank

barter — to give someone something in return for something else (ex., to swap an apple for a sandwich)

bean sprouts — bean seeds just beginning to grow, used as a vegetable

blacksmith — an iron worker who shoes animals and repairs plows and wagons

business — a company set to make money by selling goods and services

capital — manufactured resources (tools, machinery, buildings)

carbohydrates — energy foods important to animals and people (ex., foods with sugar or starch, such as a potato)

cattle — animals, such as cows and steers, which live on farms

cattle breed — a type of cattle

chlorophyll — green coloring matter of leaves and plants

choice — a thing or alternative selected

Glossary — Agriculture, Grades K-2

choice-making — the act of choosing or making a selection

circular flow — circle picture of the flow of goods, services, and money in a community

climate — weather; temperature, wind, and rain

clothing — articles worn to cover the body

colonist — one who moves to a new land but remains a citizen of the home country

community — a group of people living together as a smaller unit or area and having common interests or work

conservation — protection of our rivers, forests, and land from loss or waste

consumer — one who buys and uses things

consumption — obtaining and using food, clothing, or shelter

corral — a pen or enclosure to keep animals together

crops — plants a farmer grows and harvests

cultivate — to prepare and work the land in order to raise crops; till

dairy farm — a farm devoted chiefly to raising and milking cows

demand — amount of goods required by consumers at a given time

depend — to expect someone to provide certain things one needs or wants

digestion — the way food is used by the body to provide for energy and growth

distribution — transportation of products to market

drought — weather with no rain for a long time

economic goods — objects that are scarce and satisfy consumer wants

efficient — the best possible use of resources

employer — one who hires workers; an entrepreneur

enterprise — a business

entrepreneur — one who can combine resources to achieve goals; a person who sets up a business

Glossary — Agriculture, Grades K-2

erosion — the slow washing away of the soil by the wind and rain

exchange — to trade one thing for another

export — to send goods to other countries

farming — growing animals, crops, or timber for food and fiber

fiber — a material that can be woven into cloth, rope or twine, such as cotton, hemp, or flax; a thread-like component of a substance such as wood or glass

food groups — foods typed by nutrition provided — bread and cereals, meat, etc.

food supply — amount of food that is available at a given time

forage — plants eaten by livestock in pasture

fruit — edible part of a plant surrounding the seeds

goods — things available to buy or sell

grains — seeds from plants such as wheat, corn, rye, oats, rice, and millet, many of which are ground into flour and eaten by people and animals

grass — forage

harness — a strap of leather tying a farm machine to the neck of a farm animal, enabling the animal to pull the machine

harrow — machine used to break and smooth soil for planting

harvest — to gather the crop when it is ready

health — the general condition of the body

hydroponics — the science of growing crops in tanks or pipes filled with sand or gravel

immigrant — a person who moves to a new country to settle there

import — to bring goods from another country

income — what the farmer receives for goods he produces

interdependent — state of reliance upon one another by two or more persons in geographic areas

Glossary — Agriculture, Grades K-2

investment — money spent for tools, equipment, and buildings, or research to improve production; the purchase of capital goods

irrigate — to water the crops

labor — the people who work; workers as a group; one of the resources of production

land — soil on which crops can be grown and buildings can be constructed

livestock — farm animals raised for sale or farm use

machine — any tool which makes the job easier or faster

market — a place where things are bought and sold or bartered

marketing — selling crops or livestock; going to market

mechanize — to use a machine to speed up work otherwise done by hand

mill — a machine used to grind wheat into flour

minerals — materials of which rock and soil are made; any substance that is not a plant or an animal

misuse — failure to use land and water in the best way possible

money — anything widely accepted in exchange for goods and services

needs — things important to have, like food, clothing, and shelter

nutrition — the process by which plants and animals use food to grow and replace worn tissues; food

opportunity cost — something a person gives up in order to have something else

orchard — a group of fruit or nut trees

pesticides — chemicals used to kill weeds, insects, and disease germs

pioneer — the first person to do something

plant — to sow or put seeds into the ground; a factory

plantation — a large farm with many shops and workers that grows crops for market

plow — a tool used to break the soil for planting seeds

poultry — domesticated birds grown for eggs and meat

Glossary — Agriculture, Grades K-2

predict — to tell in advance; to foretell the future

price — value of a good or service stated in terms of money

processing plants — places where food is prepared and packaged

produce — to make or grow good; fruits and vegetables grown on the farm

producer — a person who uses resources to make goods people might want or need; an entrepreneur

product — a good or service

production — the process of using resources to make or grow goods

protect — to take care of

protein — a food substance thought to be essential for all plants and animals

ranch — a place used for raising livestock

recommend — to suggest as something wise to do

replant — to plant again; transplant

reproduction — to produce offsping, to hatch from an egg

research — to look closely at something to find new information; the act of studying something to find new information

reservoir — a lake or pond where water is stored

resources — materials, natural or man-made, used to grow food or make things

ruminant — a cud-chewing, hoofed animal who has a four-sectioned stomach (camel, cow, deer)

rural — having to do with the country, agriculture, or farming

save — to set apart or reserve; not to use

savings — what one keeps to use later

scarce — not enough of what one needs or wants

scarcity — not enough resources to produce everything everyone wants and needs

seasonal goods — goods available at one time or season of the year

Glossary — Agriculture, Grades K-2

services — things people do for each other

settler — one who moves to new land; a colonist or pioneer

shelter — place to live in; protection from weather

soil — the portion of the earth's surface used to grow plants

specialization — doing one job best

sprout — to begin to grow; new growth

supply — amount of goods or services available to buy

survive — to stay alive

tallow — the solid fat taken from the natural fat of pigs, sheep, and cattle to make soap

technology — knowledge used to solve problems with machinery

terminal — a station at the end of the railroad line

terrace — wide, flat strip of land on a hillside where crops can be planted

topsoil — the fertile upper layer of soil where plants have most of their roots

trade — to exchange goods or money for other goods or services; the flow of goods exchanged

trading post — frontier stores where farm crops and furs can be traded for other goods

transport — to move from one place to another

transportation — means of moving goods or people from one place to another

unavailable — not easy to get or ready to use

vegetables — plants used for food

veterinarian — a doctor who treats animals

vitamins — food substance necessary for good health

wants — goods and services which people need or desire

well-being — the state of being happy and healthy

wheat — cereal grain that gives a fine, white flour used in making breads

BIBLIOGRAPHY, GRADES K-2

Books

Teacher

Agay, Denes. *Best Loved Songs of the American People.* Garden City, New York: Doubleday and Company, Inc., 1975.
"The Boll Weevil Song" tells of the plight of the cotton farmer.

Blankenship, Mark. *Singing Is Fun.* Nashville, Tennessee: Broadman Press, 1978, pp. 17, 20, 22, 27, 36.
Songs: "Pickles" (different kinds of pickles)
"Who Stole My Chickens?" (rhythm activity)
"How Now, Brown Cow" (dairy products)
"B-I-N-G-O" (the farmer's dog)
"Barnyard Song" (series of farmer's animals)

Childcraft - The How and Why Library: How We Get Things. Chicago: Field Enterprises Educational Corporation, 1975.
Sections on agricultural and economics topics useful as background information.

Eibling, Harold H., Fred M. King, and James Harlow. *History of Our United States.* River Forest, Illinois: Laidlaw Brothers, 1969, pp. 405-421.
A complete history including the Industrial Revolution as it affected the United States.

Havenhand, I. and J. *The Farmer.* London: Ladybird Books, 1963.
A simple vocabulary and superb illustrations giving accurate information about farmers and farming. Shows how the land is prepared, the various crops that are harvested, the animals that are reared, and the machinery that helps farmers produce our food.

Hetzel, Robert L. *The Relevance of Adam Smith.* Richmond, Virginia: Federal Reserve Bank of Richmond, 1982.
Paperback, nicely illustrated treatment of the relevance of the theories of Adam Smith's *Wealth of Nations* to the bicentennial of the United States.

Johnson, Ann Donegan. *The Value of Love: The Story of Johnny Appleseed.* San Diego, California: Value Communications, Inc., Publishers, 1979.
Value Tale based on events and historical facts in the life of Johnny Appleseed, who is best remembered for planting apple trees throughout the frontier during the late 1700's and early 1800's.

McCarty, Marilu H. *Dollars and Sense, An Introduction to Economics.* Glenview, Illinois: Scott, Foresman, and Company, Inc., 1985.
Explanation and problems to the basic economic principles.

The Measure of Our Land. Washington, D. C.: U. S. D. A. Soil Conservation Service PA-128. U. S. Government Printing Office O-437-909, 1971.

Mother Goose. *The Real Mother Hubbard.* Chicago, Illinois: Rand McNally and Company, p. 32.
"Cushy Cow Bonny, Let Down Thy Milk" tells how resources provide riches.

Riedel, Manfred G. *A Kid's Guide to the Economy.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1976.
Simplified and high-interest approach to economics, illustrated.

Sell, Edward S., et al. *The Story of Georgia: A School History of Our State.* Atlanta: Science Research Associates, 1942, p. 183.
The development of Georgia from 1492 to 1942 with pictures, stories, maps, charts, and facts.

Sobel, Jeffrey. *Everybody Wins.* New York: Walker and Company, 1983, pp. 26, 47.
Game book with two games that could be used with an agricultural unit.

Tullock, Gordon, and Richard B. McKenzie. *The New World of Economics.* Homewood, Illinois: Richard D. Irwin, Inc., 1985.
A book of readings which detail the human principle in economics.

Weiss, B. J., et al. *A Place for Me.* New York: Holt Rinehart and Winston, 1980, pp. T257-T260.
Section entitled "Careers: On Quiet Roads" presents agricultural careers using text discussion and pictures teaching suggestions, and resources.

Student

Anno, Mitsumasa. *Anno's U. S. A.* New York: Philomel Books, 1983.
Japanese author presents pictorial observations of the U. S. A.; shows history and a variety of communities.

Bendick, Jeanne. *First Book of Supermarkets.* New York: F. Watts Publishing, 1954.
Lists of items found in supermarkets and countries from which the items came.

Brown, Marcia. *Stone Soup.* New York: Charles Scribner's Sons, 1947. Illustrated by Diane Paterson. Mahwah, New Jersey; Troll Associates, 1981.
"Arriving in a town where the food has been hidden, hungry soldiers set about making a soup of water and stones while the villagers watch."

Flack, Majorie. *The Boats on the River.* New York: The Viking Press, 1946.
Pictorial presentation of a variety of boats and their purposes. Certain boats are responsible for transporting food and animals.

Ginsberg, Mira. *Good Morning, Chick.* New York: Greenwillow, 1964.

Green, Carla. *Truck Drivers, What Do They Do?* New York: Harper and Row Publishers, 1967.
A wide variety of trucks, and the job of their drivers, presented in easy-to-read format.

Hastings, Evelyn Bellmont. *At The Dairy.* Illinois: Melmont Publishers, Inc., 1958.
A Melmont Look, Read, Learn book tracing milk from the cow to the creamery and on to people.

Johnson, John. *The Train Book.* Racine, Wisconsin: Western Publishing Company, Inc., (Golden Press), 1970.
A book about products transported by train; experiences of two children on the train.

Kessler, Ethel and Leonard. *All Aboard the Train.* New York: Doubleday and Company, Inc., 1964.
Account of a train ride that takes a mother and two children through the country and into the city.

Krauss, Ruth. *The Carrot Seed.* New York: Harper and Row Publishers, 1945.
Persistent care from a little boy that enables a carrot seed to sprout and grow, contrary to everyone's response of "It won't come up."

Le Tord, Bijou. *The Generous Cow.* New York: Parents Magazine Press, 1977.
A story about all the nice things a cow has to give.

Lenski, Lois. *The Little Farm.* New York: H. Z. Walck, 1942.

McGovern, Ann. *Stone Soup.* New York: Scholastic, Inc., 1968.

Sabin, Louis. *Agriculture.* Mahway, New Jersey: Troll Associates, 1985.
A simple story of the history of agriculture. A good little book to introduce the idea of agriculture; simple, colorful illustrations.

Silverstein, Shel. *The Giving Tree.* New York: Haper and Row, 1964.
A touching account of friendship between a boy and a tree. The tree gives of herself in many ways to express love for the boy.

Selsam, Millicent E. *Popcorn.* New York: William Morrow and Company, 1976.
Description of various members of the corn family, with a brief history of popcorn, and explanations of how children can grow popcorn and learn from experience many of the ideas presented. Discusses growing and harvesting of corn used for popping.

Spier, Peter. *Rain.* Garden City, New York: Doubleday and Co., Inc., 1982.
A wordless picture book illustrating what happens when it rains.

Udry, Janice May. *A Tree is Nice.* New York: Harper and Row, Publishers, 1956.
A Caldecott winner book, including colorful, as well as black and white, pictures illustrating the many benefits of a tree. The easy-to-read story ends with the planting of a tree.

Whitaker, Marilyn, and Joanne Gracey. *Our Friend Herfy.* Mason City, Nebraska: Loup Valley Queen, 1975.
A story about hereford calves. For ordering: Nebraska Hereford Auxiliary, Nebraska Hereford Association, Mason City, Nebraska 68855.

Wilder, Laura I. *Farmer Boy.* New York: Harper and Row, 1953.

Wolcott, Carolyn Muller. *God Gave Us Seasons.* New York: Abingdon Press, 1958.
Clear presentation of the importance of the seasons for plants and animals.

Wright, Betty Ren. *Good Morning, Farm.* Racine, Wisconsin: Western Publishing Company, Inc., 1964.
An easy-to-read book including color photographs of animals as well as drawings in color. A dog goes to all the animals on the farm and expresses a good morning to them. A Whitman giant tell-a-tale book.

Audiovisuals

Captain Kangaroo and the Cow. Atlanta, Georgia: Dairy and Food Nutrition Council.

Eli Lily Company. *The Peanut - Nuts and Views.* Tifton, Georgia: Georgia Peanut Commission, P. O. Box 967, 31794, (n. d.).

Film available for loan from the Georgia Peanut Commission, Tifton, Georgia.

Living in the City. Mt. Vernon, New York: Macmillan Films, Inc., 34 Macquesten Parkway, S. 10050.

Cost $69. First through third grades. Four color filmstrips, four cassettes, and teacher's guide showing the different kinds of houses that make up a city and how food is supplied to city dwellers. Explores the different kinds of services and production workers in the city.

Shaping a Nation: The Role of the Livestock and Meat Industry in History and Economics. Chicago, Illinois: Education Department National Livestock and Meat Board 50611, 1984.

Approximate cost $95. Two filmstrips and teacher's guide, with activities on the production of beef and the economics involved. Contact local college's Center for Economic Education for use of this kit.

What is a Community? Boulder, Colorado: Learning Three Filmstrips, 934 Pearl Street 80302.

Cost $52. First through third grades. Four filmstrips, two cassettes, and teacher's guide introduce children to the concept of the community.

"*What We See at the Animal Farm,*" from the set *Places to See in the City.* New York: Prima Education Products, Division of Hudson Photographic Industries, Inc., Irvington-on-the-Hudson 10533.

Pictures of animals as they actually appear on the farm. Valuable for animal recognition. 42 frames.

Why Money? Bloomington, Indiana: Agency for Instructional Television, Educational Film Center, Box A 47401, 1978.

Ninth film in the Trade-Offs series. Cost $390. The function of money; money as a medium of exchange; functions of cash, checks, and credit cards.

Other Sources

Activities for Learning about Conservation of Forest Resources. Washington, D. C.: Forest Service, U. S. D. A. 20250, 1979.

A guide for leaders of youth groups. Single copies available from Regional Forester, Forest Service, U. S. D. A., 1720 Peachtree Road, N. W., 30309.

Adkins, Peggy, et al. *From Seeds to Supper.* Athens, Georgia: Georgia 4-H Extension Service, University of Georgia, and the United States Department of Agriculture, 1983.

Activity booklet about agriculture in Georgia.

Agriculture at Berry College. Mount Berry, Georgia: Berry College, Agriculture Department 30149.

Educational opportunities at Berry College highlighted, with agricultural enterprises featured.

Agrirama. Tifton, Georgia: Georgia Agrirama, P. O. Box Q 31793, (n. d.).
Pamphlet describing Georgia's agriculture museums, with buildings and artifacts.

Aids to Teaching Economic Principles. Old Greenwich, Conn.: National Schools Committee for Economic Education, Inc., P. O. Box 326, 06870.
Ordering pamphlet with sample poster entitled "The Customer Is Boss."

Barber, Ann, Betty Blasingame, and Maxine Woold. *Egg-Bert, A Case Study of Sutherland's Eggs, Inc.* Atlanta: Georgia State University Center for Business and Economic Education, 1985.
Coloring book and teacher's edition available for this study of the production, distribution, and use of the egg.

Barth, James L. *Elementary and Junior High School Studies Curriculum, Activities, and Materials*. Lanham, Maryland: University Press of America, 1983, pp. 56, 73.
Identifying climate and chart.

Bishop, Norman G. *Native Trees of Georgia*. Athens, Georgia: University of Georgia, George Foster Peabody School of Forestry, 1968.
Free booklet. Identifies key characteristics, uses, wood type, and distribution of trees.

Cotton, the Perennial Patriot. Memphis, Tennessee: National Cotton Council, Box 12285, 38112 (n. d.).
Historical events in U. S. A. cotton production.

Davison, Donald G. *Strategies for Teaching Economics*. New York: University of Iowa, Joint Council on Economic Education, 1977.

Eggory's Egg-Craft Ideas. Forest Park, Georgia: The Georgia Egg Commission, State Farmer's Market 30050.
Fun-filled activity booklet.

The Elementary Economist. Cambridge, Mass., National Center of Economic Education for Children, Lesley College. Volume 6, Number 3, pp. 4-5.
Infrequent newspaper containing economics lessons for primary and middle grades.

Estella, Joseph M., and George Roberts. *Guitar Playing Made Easy for Everyone, Book 1*. Deer Park, New York: William J. Smith Company, Inc., 1975, p. 20.
Melody and chords for playing "Old McDonald."

Farm Animals — Their Products and Uses. Clemson, South Carolina: 4-H School Enrichment Program, Clemson University and U. S. D. A. Extension Service, Manual No. 96, 1982.
Cost $2.20 per single copy. How the main products of farm animals get from the farm to your table.

Foods for Good Health. St. Paul, Minnesota: Trend Enterprises, Inc. 55164.
Bulletin board set.

"The Forester" *Egg-Bert, A Case Study of Sutherland's Eggs, Inc.* Atlanta: Georgia State University Press, 1985, p. 16.

Gaston, William W., Gold Kist, Inc., *"Why Do We Need Farmers When the Grocery Stores Are Full?"* Unpublished paper prepared as speech for the Economics Education Symposium, Berry College, Mount Berry, Georgia, 30149, August 12, 1985.
Factual account of the status of farms in the U. S.

Gates, Richard. *New True Book: Conservation.* Chicago: Children's Press, 1982.

Georgia Agriculture. Atlanta: Information Press Office 30334, 1984, pp. 14, 22, 25.
Poultry, soybeans, and wheat in Georgia.

Georgia Power Heritage Program. Atlanta: Georgia Power Company, (n. d.).
Historic photographs.

A Glossary of Farm Terms. Bank of America, N. T. and S. A., 1974.
A list of basic farm terms, clearly defined.

Jacoby, Margaret, and Toni Hormann. "The Sandwich" *Dictionary Skills Gameboards.* Verdes Peninsula, California: 26616 Indian Peak Road 90274.
Game that teaches the skill of root words.

Knipers, Dana. *Educational Farm Food Series.* Harrisburg, Pennsylvania: The Know-About Publications 17104, (n. d.).
Fun and factual coloring books for children.

Kuralt, Charles. "The South, A Portrait of a People and Their Land." Birmingham, Alabama: *Progressive Farmer,* Vol. 101, No. 2, pp. Century 4-37, February, 1986.

Learning How Climate Affects Plants. Knoxville, Tennessee: Agriculture Extension Service, University of Tennessee.
PB 1048-5M-5/83, 4-H member guide, Unit 8.

Life on the Farm. Fort Valley, Georgia: Cooperative Extension Service, Fort Valley State College, Booklet FV-10-1, 1982.
Coloring book with text.

Murphy, Jane. "Nature is Resourceful." *Elementary Economist.* Cambridge, Massachusetts: National Center for Economic Education for Children, Lesley College 02138, Volume 6, Number 1, pp. 4-5.

Nutrition Action Pack. Chicago: McDonald's Corporation, 1975.
Free copies available from Public Relations Manager, McDonald's Corporation, One McDonald Plaza, Oak Brook, Illinois 60521.

On-The-Farm Lacing Cards. Racine, Wisconsin: Western Publishing Company, Inc., 1984.
Ages 3-6. Cost $2.19. Set has 4 cards with farm-related pictures and laces.

Peanut — Nutrition in a Nutshell. Tifton, Georgia: Georgia Peanut Commission, P. O. Box 967, 31794.

Peanutrition Plus. Tifton, Georgia: Georgia Peanut Commission, P. O. Box 967, 31794.
Peanut information guide.

Peanuts . . . Power Packed Protein. Tifton, Georgia: Georgia Peanut Commission, P. O. Box 967, 31794.

People on the Farm: Growing Oranges. Washington, D. C.: U. S. D. A., Office of Government and Public Affairs, U. S. Government Printing Office, 1983.

People on the Farm: Broiler Growers. Washington, D. C.: U. S. D. A., Office of Government and Public Affairs, U. S. Government Printing Office, 1977.
Steps in growing broilers.

People on the Farm: Corn and Hog Farming. Washington, D. C.: U. S. D. A., Office of Government and Public Affairs, U. S. Government Printing Office, 1982.
A farm family growing corn and hogs in Iowa.

People on the Farm: Dairying. Washington, D. C.: U. S. D. A., Office of Government and Public Affairs, U. S. Government Printing Office, 1982.
Life on a Dairy farm.

People on the Farm: Growing Vegetables. Washington, D. C.: U. S. D. A., Office of Government and Public Affairs, U. S. Government Printing Office, 1982.

People on the Farm: Growing Wheat. Washington D. C.: U. S. D. A., Office of Government and Public Affairs, U. S. Government Printing Office, 1980.
History of drought that brought on the dust bowl in the West during the depression.

People on the Farm: Raising Beef Cattle. Washington, D. C.: U. S. D. A., Office of the Government and Public Affairs, U. S. Government Printing Office 1980.
Pictures of people on a cattle farm.

Places to Visit. New Echota Indian Museum (restoration site), Calhoun, Georgia. Agrirama, Tifton, Georgia. Berry College Agricultural Operations, Mount Berry, Georgia. Savannah Shipping Docks. Westville historic community in central Georgia. Gal-Ge Poultry Farm, Calhoun, Georgia. Local Forestry Commission office. Georgia Department of Agriculture Experiment Stations in Rome and Tifton, Georgia.

Plants, How They Improve Our Environment. Ankeny, Iowa: Soil Conservation Society of America, 1982.

Save Our State Environmentally. Atlanta: Telephone Pioneers of America, Dixie Chapter 23, produced in cooperation with the Secretary of State's Office, Max Cleland, Georgia Secretary of State.
Georgia map. United States map.

Schooldays. Schaffer, Frank. Vol. 1, Number 2 Apr/May 1982. Frank Schaffer Publications, Inc., Des Moines, IA. Pages. 22-23.
Addition and subtraction word problems.

Schooldays Schaffer, Frank. Vol. 2, Number 4 Apr/May/June 1983. Frank Schaffer Publications, Inc. Des Moines, IA. Pages 17-18.
Reading comprehension sequencing and consonants Ff, Hh, Pp, Ss, Ww.

Spengler, Priscilla. *Farm Songs for the Flannel Board.* Elgin, Illinois: David C. Cook Publishing Company, 1967.
Flannel board pictures and song sheets with teacher suggestions, a story, and activities for each song.

The Story of Cotton. Memphis, Tennessee: National Cotton Council of America, P. O. Box 12285, 38112.

The Story of Land. Ankeny, Iowa: Soil Conservation Society of America, 1981.

A Trip to the Farm. Elgin, Illinois: David C. Cook Publishing Company, 1986.
Includes farm pictures of animals, plants, machinery, and people.

Wegner, Suzanne. "Calling All Resources," from *Elementary Economist.* Cambridge, Massachusetts: National Center for Economic Education for Children, Lesley College, Volume 6, No. 1, p. 7.

William, D. M. *Paper-Bag Puppets.* Belmont, California: Fearon Pitman Publishers, Inc., 6 Davis Drive 94022, p. 55.
Patterns for preparing interesting puppets from paper bags.

"With a Munch, Munch, Munch." Author unknown.
Song naming dairy products.

The Wise Family. Atlanta: Georgia Department of Agriculture, Consumer Services, Capitol Square 30334, 1984.
Coloring book about the Wise family's farm.

Zimmerman, Martin H. *Tree.* Chicago: Reprinted from *The World Book Encyclopedia.* World Book Childcraft, A Division of World Book, Inc., a Scott Fetzer Company, 1982.
Virtually a complete guide to trees.

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